



THE CHEMIST AND DRUGGIST

TELEPHONE
1852
NUMBER

CHIEF OFFICE,
LONDON
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E.C.

TELEGRAPHIC
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No. 497. VOL. XXXV.

OCTOBER 26, 1889

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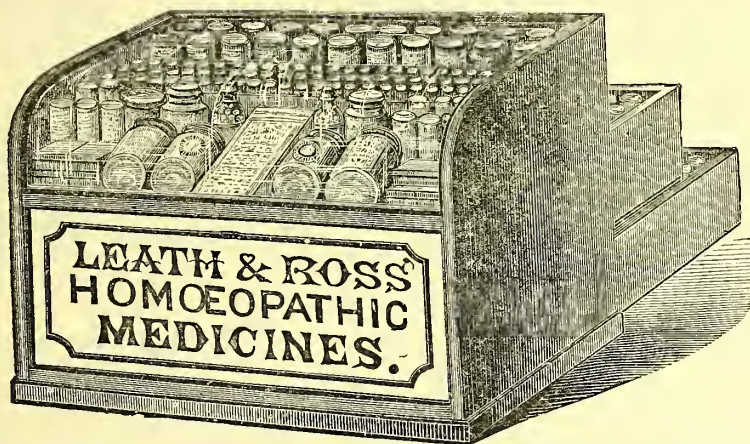
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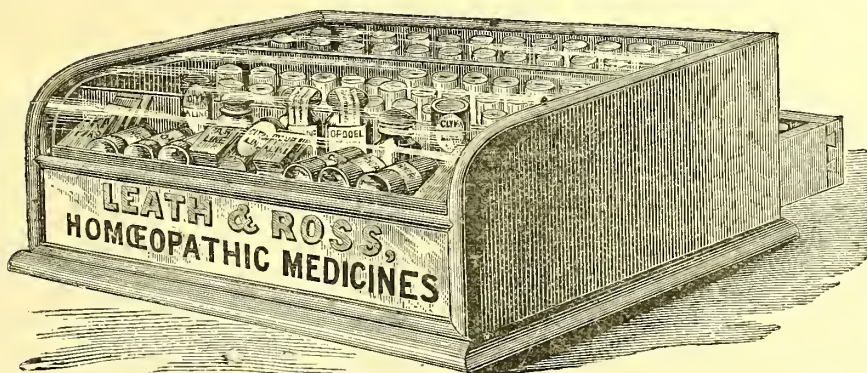
Neuraline	--	--	1/1½	Berberine	--	--	1/1½	Linimentum Auricularis	...	1/1½
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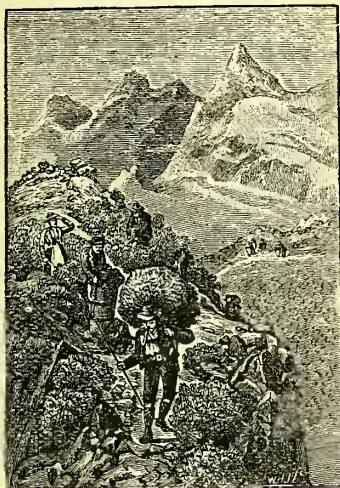
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MINOR.

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" W. PH KINGTON	" W. TAYLOR	" J. ROSE
" H. R. BROADBENT	" J. BULLOCK	" T. R. ASHTON
" J. W. BUCKLEY	" W. ARRANDALE	" W. HAYWOOD
	Mr. J. S. WHITE.	

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A second half of the December class will begin work on October 21st.

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THE SESSION (1889-90) commenced on Monday, September 2, and those intending to join the course, September to December, are requested to send in their names at once.

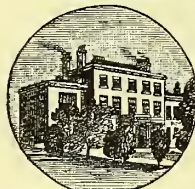
THE PAST SESSION has been a very successful one; out of 36 sent in for the "Minor" 25 have passed, as against 18 for the previous Session and 12 for the Session 1888-87.

SCHOLARSHIPS.—The Redwood Scholarship has been won by a pupil of the Liverpool School, Mr. E. B. Sherlock. . . . Two years ago a "Bell" Scholarship was won by another pupil of this school, Mr. W. A. Salter, who afterwards became Pereira Medallist.

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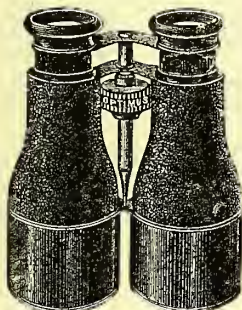
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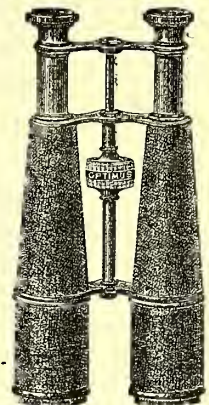
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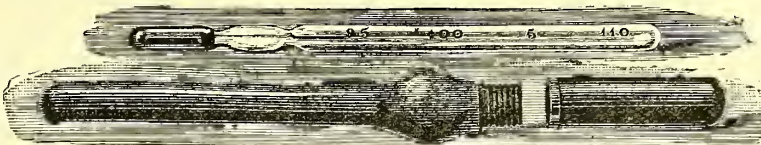
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Has been tested in a Physiological Laboratory as a Germ Destroyer, and proved to be more efficient than any other experimented with.
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EDWARD COOK & CO., HOUSEHOLD and TOILET **SOAP MAKERS, LONDON, E.****£10 REWARD** will be paid for information relative to fraudulent Imitators, who represent that they have bought my Recipe, or that their Goods are of my Manufacture. Such Reward to be paid on conviction.
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GENUINE.

The best preparation for the Hands and Complexion, and the Infallible cure for Chaps and Roughness of the Skin.

In Red Cases, 1/ size, 9/ dozen; 2/6 size, 22/6 dozen.

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In consequence of the numerous imitations I have abandoned the Black Cases as used by me when in Leeds. The genuine is now enclosed in Red Cases only. Some of the imitators go so far as to say that they have purchased my Recipe. Such assertions are utterly untrue.

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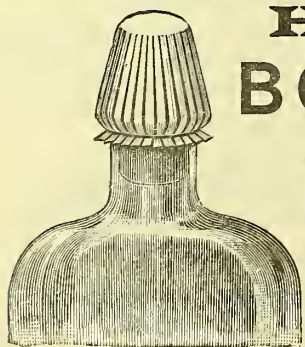
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**W. K. FERGUSON, Ph. Chemist,
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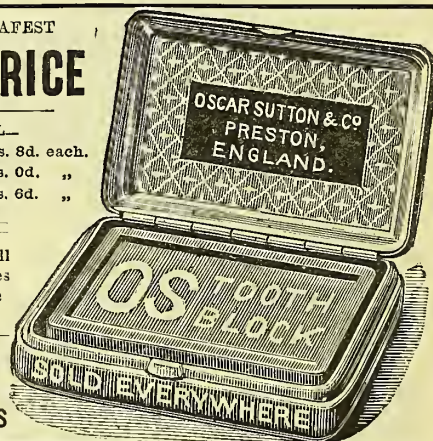
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No 0 Loose .. Os. 8d. each.
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TESTIMONIALS****PURE OTTO OF ROSE,
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THE OTTO OF ROSE which this house distills and exports is known above all by the absolute purity of its quality and the unexcelled sweetness and strength of its odour. It is guaranteed to be the finest essence produced in the famous Rose Valley of Bulgaria.

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GUARANTEED PURE.EVERY GENUINE PACKAGE BEARS THEIR LABEL
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NON-STIMULATING	In acute inflammatory skin troubles "Vinolia" is	SOOTHING & EMOLLIENT
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TERMS

Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of 1d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C." and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1 10s. 6d.

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Drugs and Chemicals.

Potass. iodid., 10 lb. pot. of Atkinson's; what offers? 120/7.

Poppy heads.—250, 2s. 9d.; 500, 4s. 9d.; 1,000, 9s.: 5,000, 40s.; sample free. Elliott, Chemist, Bedford.

4 lbs. bismuth. subnit., 6s. 6d. lb.; 5 lbs. pulv. critharid. Russ., 3s. 11d. lb.; Winchester tinct. io line, B.P., 2s. 6d. lb.; 21bs. oil mint-American, 10s. lb.; 7 lbs. pulv. rhei. E.I., 2s. lb. J. C. Lingdale, Skelton.

Proprietary Articles.

Lamplough's saline, fresh and clean, 21s. 6d. dozen. Boot's Drug Co. (Lim.), Nottingham. Compound sulphur lozenges, 1s. lb.; Bland's pills, 10 gross, 5s. 6d., carriage paid. Davidson & Gray, Dundee.

Literature.

Pharmaceutical Journals, 1879 to 1889, inclusive, for 10s. Upjohn, Chemist, Barrow, S.W. Kelly's "Directory of Chemists," 1883, new issue, 14s. 6d., carriage paid. 120/6.

Educational.

Attfield's "Chemistry," 4th edition, for 3s.; Muter's "Materia Medica" (12s. 6d.), latest; Wills's "Materia Medica" (10s. 6d.), 7th edition, with coloured plates; Wills's "Analytical" (2s. 6d.), latest; Squire's "Companion" (12s. 6d.), 13th edition; any will be sent, carriage paid, at half the published price. "Minor," 69 Carlton Road, Tufnell Park, N.

Formulas.

Reliable recipes, 6d. each; full set of 130 neatly copied in book, 7s. 6d.; sent for list. "Chemist," Edwards, Wye, Kent.

Set of twenty first-class veterinary recipes, now in use at old-established practice, 2s. 6d.; first class perfume, fit to sell in any shop in the kingdom, in make for last 30 years, sure to please, or money returned, 2s. 6d.; Southall's boats wanted. Price to A. Johnson, 64 Furness Hill, Sheffield.

Shop Fittings.

91 second-hand mahogany-fronted gold-labelled drawers, lockers under, 15 ft. run, 1s. 3d. per drawer; also show-cases, counters, dispensing screen, shop rounds, carboys, specie jars, and entire shop-fittings equally cheap. Natali & Co., 184 Aldersgate Street, nearly opposite Maw's. Established 1863.

Glass bottles, job lines.—About 50 gross 3-oz. pale green pomades for corks, 4s. 6d. per gross; 4 gross 6-oz. screw nickel-capped pomades, 16s.; 1 gross 16-oz. ditto, 30s.; 3 gross 1-pint (reputed) green syrups, 7s.; 4 gross 1-pint ditto, 10s.; 2 gross 1-pint ditto, 15s.; 5 gross 1-pint white syrups, 12s.; 3 gross 1-pint ditto, 20s.; 1 gross 6-drachm lavender, 5s.; 3 gross 2-oz. white globe-necked panels, 7s. Hearn, 381 Kingsland Road, London.

"Second-hand shop-fittings for sale—great bargains."—Two nests of mahogany-fronted drawers, with lockers under, glass knobs, gold labels, 60 drawers in each nest, 6l. each; 3 ft. 9 in. nest ditto, 23 drawers, 50s.; 6 ft. bent-glass counter case, 9s.; 3 ft. counter case, with sloping front, 23s.; 2 desks with glass cases in front, 35s. each; large outside lamp, with 2 coloured lenses, 50s.; 2 panelled fronted counters, with solid mahogany tops, each 13 ft. long, 50s. each; shop-dial, 20s.; 4 carboys and stands, 60s.; quantity of shelving and cornice, 50s.; 2 mahogany window enclosures, one about 6 ft. and the other 5 ft., 50s. each; small upright glass case, 2 ft. 3 in. square, 5 in. deep, 20s.; set of French scales and weights, 20s.; 42 black stock bottles, with caps, gold labelled, 30s. the lot; 230 stoppered rounds, 40 blue ointment jars, scent bottles, jujube jars, &c., 15l. the lot; also a lot of other fittings, at Philip Joseph's, 54 Old Street, Goswell Road, London, E.C.

For sale, bargains.—All numbers refer to Maw's illustrated list.—Counter cases, plate glass, fig. A18, 4 ft. 9 in. long, 90s.; 6 ft. long, 5l.; 8 ft., 6l. 10s.; tooth-brush cases, A10, 30s.; ditto, A9, 30s.; A16, 30 in. long, 45s.; 3 ft. long, 50s.; 3 ft. 6 in. long, 55s.; 5 ft. 6 in. long, 5l.; A4, 13 ft. 6 in. upright and bent plate-glass case, 5l.; ditto, 4 ft. 6 in. long, flat case in front, 30s.; desk and case, plate glass and mahogany, 35s.; 6 ft. dispensing screen, plate glass and mahogany, 4l. 10s.; 5 ft. ditto, 90s.; plate-glass case fronted counters, mahogany tops, 5 ft. long, 6 ft. long, 10 ft. long; 14 ft. mahogany counter; specie jars, carboys, bottles, jars, scales, show stands, 3 glass shelves, 60s., worth 5l. 10s.; mahogany wall case, 9 ft. 9 in. long, 8 ft. 10 in. high; ditto, 6 ft. by 4 ft. high; ditto, 4 ft. by 5 ft. 6 in. high; pedestals for carboys, mahogany, fig. A270; 2 ditto, fancy iron ditto, 50s.; 16 ft. drawers, shelving, lockers, cornice, complete, 9l. 10s.; outside lamps; sponge cases, &c. Pink and blue ointment jars, pill-machines, mortars, very cheap line; surgical instruments cheap. Ekanah Natali, 207 Old Street (near County Court), Shoreditch, London. No connection with any other house.

Miscellaneous.

Silk-top puffs, medium size, 2s. 6d. per dozen, post free. Lakeman, Chemist, Leytonstone. 18 boxes choice cigars in dispute, cost 15s., price to clear 9s. 6d. 100. Slater, Beeston Hill, Leeds.

12 dozen spectacles, 3 dozen folders (Lawrence's), assorted, 10 cwt. zinc sulph., coml.; 5 cwt. glue. Seely, Halifax. Porous plasters, job lot, in good condition; sample sent for 3d.; good value; 1s. 4d. per doz. Price, Chemist, Walthamstow.

Window attraction.—Bichromate battery, coil, and two Geissler's vacuum tubes, 22s. or exchange. M'Kee, Chemist, Tunstall, Staffordshire.

Spectacles, worth 16l. net, will sell for 8l., or best offer; Herbert & Godfrey's make; quite new. Coleman, Chemist, Wolverhampton.

Microscope, complete, equal to new, mahogany cabinet, 2 eye pieces, 50 slides; cost 11l. 11s., price 6l. 6s. "Chemist," 6 The Drapery, Northampton.

260 bottles homoeopathic medicines, in handsome show-case; also cabinet containing quantity assorted diamond dyes, 50s. the lot. Natali & Co., 184 Aldersgate Street, E.C.

Mr. Gray, Chemist, Rothwell, Kettering, has pouter, dragon, Antwerp, and homer pigeons, prize and prize-bred, for sale cheap. Send for particulars; approval; deposit.

Seven boxes choice 1885 Havana cigars, cost 34s., price 21s.; also 25/50's choice cigars, cost 11s. 6d., price 6s. 6d. per 50; sound and good condition. Slater, Beeston Hill, Leeds.

Great Bargain.—Four hundred Christmas and New Year's cards, all new designs last season by best makers; half of them are gilt or silver edged. If sold as they were marked last season will realise 3l. 17s. In order to clear right out will take 27s. 6d. for the lot. Preece, Bildeston, Suffolk.

Brass paste, Helmet brand, 1d. tins, 4s. 6d. gross —10-gross lots, 4s. gross; 50-gross lots, 3s. 6d. gross. Rice starch, 1-lb., 1-lb., and 1-lb. fancy picture boxes, 56-lb. cases, 21s. 6d. per cwt. Best paraffin matches, small, 50-gross case, 2l. 10s.; large, 1s. 4d. gross in 25-gross cases, free on rails Hull. Send stamps to cover cost for sample. Beckett, Barnstorn Street, Hull.

Wright's ventilating gas stove, cost 35s., 20s.; Wright's radiating ditto, cost 32s., 15s.; Bracher's automatic still, copper, n. 2, 20s.; botanical and other lantern slides, 1s. 3d. each, 12s. dozen; brass counter scales, fig. 1, to weigh up to 4 lbs., without drawer, 30s.; brass counter scales, fig. 5, up to 7 lbs., 25s.; both in thorough repair. Francis E. Rookledge, Easingwold.

WANTED.

Attfield's "Chemistry," cheap. Jermiah, care of Davies, Chemist, Tenby, Pembrokeshire. About 20 4-lb. ointment jars, fig. 13 Maw's; lowest price; labelled. Longtoft, Hampton. Pillar lamp, with two or three good lenses, in good condition. 92/75.

Electro-plated bougie mould. Full particulars to Kemp, Chemist, Manchester.

Shop fittings.—All descriptions purchased for cash. Natali, 184 Aldersgate Street, E.C.

Southall's boat, in perfect condition; state lowest price. Wiseman, Chemist, Gravesend. *Chemist and Druggist Diary* for 1888 and 1889. State price to Hill & Dale, Druggists Blackburn.

10 or 8 gallon carboy, full height, 36 in.; two or four specie jars, about 30 in. high; 1 doz. 4-lb. ointment pots, 1 doz. pill pots, about 12 oz., to match; all in good order, and cheap; full particulars by letter. Mulloy, 16 Hatherley Street, Liverpool.

Address Wanted.

H. Kemp, Manchester, would be glad of address of Mrs. Vere-Harrison.

JOHNSON & JOHNSON

NEW YORK and LONDON,
MANUFACTURING CHEMISTS,
MANUFACTURERS OF ALL VARIETIES OF

MEDICINAL AND SURGICAL PLASTERS IN RUBBER COMBINATION

(PERFORATED AND PLAIN), AND ISINGLASS AND MUSTARD PLASTERS.

ALSO MOIST ANTISEPTIC DRESSINGS & ABSORBENTS.

IMPROVED BELLADONNA PLASTER.

Increased action by the addition of Boracic Acid and a mild rubefacient, by which the activity of the cutaneous glands is stimulated, and their power of absorption increased.

We have succeeded in greatly increasing the therapeutic value of Belladonna and other Plasters.

FIRST.—By preparing the mass in a manner calculated to promote a more rapid absorption of the incorporated drug.

SECOND.—By employing (in Belladonna Plaster) a more reliable extract of the drug than is commonly used.

The attention of manufacturers of Medicated Plasters has hitherto been directed chiefly toward perfecting the mechanical excellence of their preparations, overlooking, to a certain extent, the real end and aim for which Plasters are made.

The extent to which counter-irritants, solvents, detergents, &c., can be utilised in Plasters to produce a mechanico chemical alteration of the epidermis, thus rendering the skin more absorptive, has been largely if not entirely overlooked.

By the addition of Boracic Acid and a mild rubefacient to the regular Belladonna Plaster formula, several important advantages are secured. The fatty matter in the pores is dissolved by the detersive action of the former, and the glands are expanded and stimulated by the counter-irritative action of the latter, by which means not only is a larger proportion of the medicinal element of the Plaster absorbed, but the therapeutic effect is both increased and more rapidly obtained.



ANTISEPTIC TABLETS.

The increasing demand for antiseptic agents in a convenient form has induced us to prepare Corrosive Sublimate Tablets after the following formula:

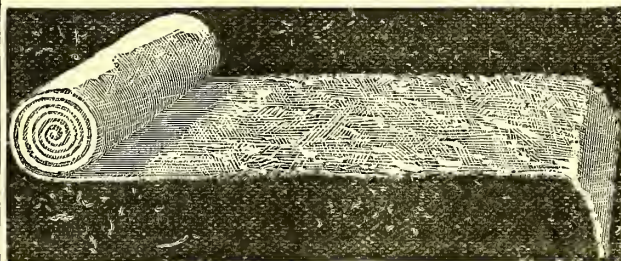
Corrosive Sublimate, gr. 7, 3.

Ammonium Chlor., gr. 7, 7.

The ammonium chloride is used to make the solution permanent so that the corrosive sublimate will not be precipitated by the organic matter usually contained in water. Each Tablet contains the requisite amount of corrosive sublimate to make a solution of 1-1,000 when added to a pint of water.

ABSORBENT COTTON IN EVEN SHEETS

Rolled with Tissue Paper between them to prevent felting.

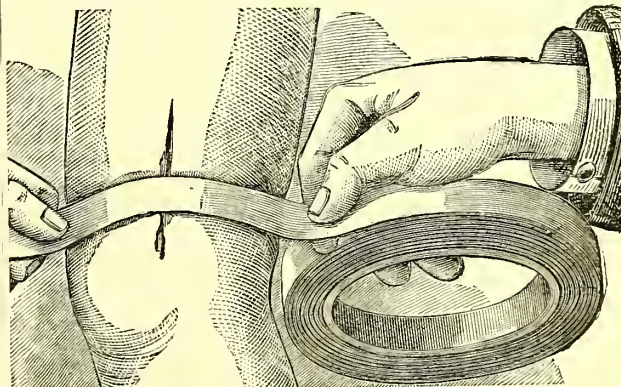


Cotton in this form is as easily applicable as an ordinary cloth bandage.

Its advantages can be seen at a glance.

Supplied in all sized Packets from 1 oz. to 1 pound.

RUBBER ADHESIVE PLASTER on HOLLOW CYLINDERS.



Pronounced by Surgeons to be the most convenient form ever devised for adhesive plaster. Besides its convenience it is much cheaper than rubber adhesive plaster on spools. It is put up in width varying from $\frac{1}{2}$ an inch to 3 inches, 5 yards long, in neatly decorated tin boxes.

Our goods are supplied by all the leading Wholesale Houses in Great Britain and Ireland, also by our
SOLE WHOLESALE AGENTS, H. C. MASON & CO., 1 & 2 AUSTRALIAN AVENUE, LONDON, E.C.
who will be glad to forward Lists and terms on application.

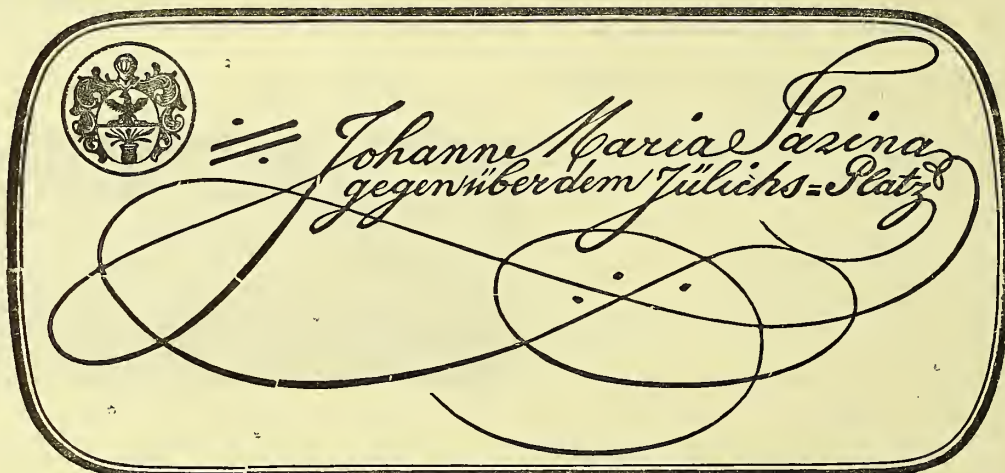
(When ordering through the Wholesale Houses care should be taken to specify the goods of JOHNSON & JOHNSON'S Manufacture.)

EAU DE COLOGNE

OF THE MOST ANCIENT DISTILLER,

JOHANN MARIA FARINA,
Opposite the Julichs Place, COLOGNE,
ESTABLISHED A.D. 1709.

PRIZE MEDALS:—LONDON, 1851 AND 1862; OPORTO, 1865; PARIS, 1867; VIENNA, 1873.

By appointment, Sole Purveyor to Her Most Gracious
Majesty Victoria, Queen of Great Britain & Ireland;
Their Royal Highnesses the Prince and Princess of
Wales; Albert II, King of Saxony;Their Majesties, William II., German Emperor and
King of Prussia; Alexander II., Emperor of Russia;
Francis Joseph, Emperor of Austria; Lewis, King
of Portugal.In consequence of increasing inquiries from the Colonies for my Eau de Cologne, the only genuine, I
beg to submit my Price Current.At the same time I beg to call special attention to the following facsimile of my Trade Mark for the
protection of which I have instituted thirteen suits in the High Court of Chancery, all of which have been
decided in my favour.All similar Labels being more or less imitations of the same, I shall proceed as before against all persons
selling or exposing for sale any such imitations.I only prepare one quality of Eau de Cologne. This quality never varies in the slightest degree, and there
has not been the smallest change in the manufacture since the year 1709, when it was invented by my ancestor.Orders equal to at least 12 dozen short bottles will be promptly executed at 13s. 6d. per dozen, against my
bill drawn at three months from the date of invoice, delivered free on board the export ship, at Rotterdam,
Antwerp, Hamburg, or Bremen, no charge being made for the case and packing, but insurance charged extra.
7½ per cent. discount is allowed for orders equal to at least 100 dozen, but on no smaller quantities.I may add that, as I do not draw on the Colonies, all Orders must be accompanied by a credit on some
London House, or permission to draw on same at three months.The Goods can also be shipped in transit through London at a very small additional expense, full particulars
of which may be obtained of my Sole Agents for Great Britain and Ireland:—**MESSRS. J. & R. McCRACKEN,**
No. 38 Queen Street, Cannon Street, London, E.O.

The following are the sizes of my bottles:—

No. 1. Long Green Flasks	—	—	—	—	—	—	12 bottles	} to one dozen.
" 2. Short White Bottles	—	—	—	—	—	—	12 "	
" 3. Double ditto	—	—	—	—	—	—	6 "	
" 4. Wickered Bottles (small)	—	—	—	—	—	—	8 "	
" 5. ditto (medium)	—	—	—	—	—	—	4 "	
" 6. ditto (large)	—	—	—	—	—	—	2 "	

JOHANN MARIA FARINA**OPPOSITE THE JULICH'S PLACE.**

COLOGNE: January, 1889.

S. MAW, SON & THOMPSON'S

CHEST PROTECTORS AND VESTS

For Shielding the Lungs.

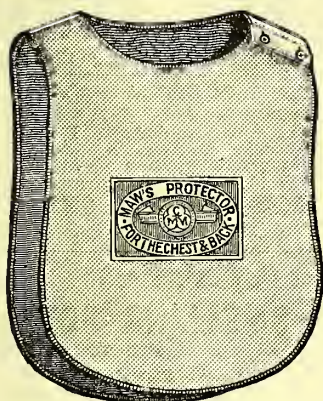


FIG. 3.
Double, for the Chest and Back.

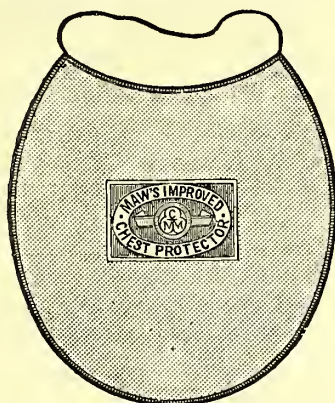


FIG. 4.
Single, Chest Protector.



FIG. 5.
Vest, a Shield for the Lungs.

CHAMOIS AND FLANNEL.

					No. 1	No. 2	No. 3	No. 4
Fig. 3.	Double	...	...	per doz.	20/	26/	32/	39/
	Ditto, perforated...	...	...	"	24/	32/	38/	46/
Fig. 4.	Single...	...	...	"	9/	11/6	13/6	16/
	Ditto, perforated...	...	...	"	11/	14/	16/	19/
Fig. 5.	Vests	"	...	"	27/	34/	42/	51/

FELT, ASSORTED SCARLET AND WHITE.

					No. 1	No. 2	No. 3	No. 4	No. 5
Fig. 3.	Double, best...	...	per doz.		17/	22/	27/	33/	44/
	Ditto, second	...	"		14/6	19/	23/	28/	37/
Fig. 4.	Single, best ...	...	"		7/6	9/6	11/	14/	20/
	Ditto, second	...	"		6/6	8/	9/6	12/	16/
Fig. 5.	Vests, Scarlet	...	"		17/	22/	27/	33/	40/

FELT, NATURAL UNDYED WOOL.

					No. 1	No. 2	No. 3	No. 4	No. 5
Fig. 3.	Double	...	per doz.		18/	24/	30/	36/	50/
Fig. 4.	Single...	...	"		8/	10/	12/	16/	22/

SPECIAL QUOTATIONS TO WHOLESALE BUYERS.

S. MAW, SON & THOMPSON, LONDON.

FACTS SPEAK FOR THEMSELVES!

Results of a voting recently held in the pages of the *British and Colonial Druggist*, as to the most popular makers of the various articles sold by Chemists, reveal the following indisputable facts under the heading of **Menthol Cones**:—

Votes for—

Hockin, Wilson & Co. 65
Christy & Co. 63
Maw 28
Castle Brand 5

161

Votes for—

Shirley's

A1 Brand 644

So that out of 805 votes, **SHIRLEY'S BRAND** obtained 80 per cent., whereas all other brands put together obtained but 20 per cent., or comparing each brand separately.

SHIRLEY'S obtained—

Nearly 10 times as many votes as	Hockin, Wilson & Co.'s.
Over 10 " " "	Christy & Co.'s.
" 23 " " "	Maw's.
" 128 " " "	Castle Brand.

THE REASON IS SIMPLE.

Every endeavour has always been made to assist the retailer in selling

SHIRLEY'S A1 BRAND MENTHOL CONES,

By giving away Show Cases, Dummy Cones, Handbills, &c., the latest in this way being "THE LITTLE CRIER."



This Elegant Biscuit-China Figure, an Ornament to any Shop,

GIVEN AWAY

To Purchasers of 25/- worth of

SHIRLEY'S A1 BRAND MENTHOL,

Or two if 40/- Order is Placed.

The following special parcels have been arranged to suit all classes of trade:—

Parcel 1, 25/-. 4 doz. 2d., 1 doz. 3d., 2 doz. 3½d., 3 doz. 4d., 2 doz. 6d.

Parcel 2, 25/-. 4 doz. 6d., 2 doz. 4d., 1 doz. 1s.

Parcel 3, 25/-. 3 doz. 2d., 2 doz. 1s., 1 doz. 4d.

Parcel 4, 25/-. 1 doz. 9d., 2½ doz. 1s., 3 doz. 1s. 6d.

By calculating what each of the parcels would realise when sold, it will be found that they yield an average profit of 50 per cent. to the retailer on his outlay.

Parcel 5, 40/-. 4 doz. 2d., 2 doz. 3d., 3 doz. 3½d., 5 doz. 4d., 4 doz. 6d.

Parcel 6, 40/-. 5 doz. 6d., 3 doz. 4d., 2½ doz. 1s.

Parcel 7, 40/-. 4 doz. 2d., 4 doz. 4d., 1 doz. 9d., 2 doz. 1s.

Parcel 8, 40/-. 4 doz. 1s., 2 doz. 9d., 3 doz. 1s. 6d.

1d., 2d. and 3d. **MENTHOL CONES** for those who are obliged to sell cheap shapes.

No. 110v. 1d. Vase shape, 3 doz. on a card. 7/6 gross.

No. 114. 2d. Varnished Pedestal shape, 3 doz. on card. 16/ gross.

No. 115. 3d. Varnished Draughtsman, 2 doz. on card. 20/ gross.

A1 COCAINE MENTHOL TOOTHACHE TUBE.

Sells splendidly; 12 on a card, 3/6 dozen.

**SHIRLEY'S****20/ CASE OF SMELLING BOTTLES.**

Order one of these cases and you will not regret it. The case is lined with maroon velvet, and has a mirror back. The goods can be got at from the counter, as the case opens from the back. You can rely on a good assortment of bottles being sent you.

ARTHUR W. SHIRLEY, 30 PATERNOSTER SQ., LONDON, E.C.,
And 11, 12, and 13 ROSE STREET, NEWGATE STREET.

Prize Medal and Diploma Awarded, 1888.

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THE GREAT FLORAL AIR PURIFIER

FOR THE

Wardrobe or Pocket, Drawing Room and Ball Room.

PETAL DUST has had a greater sale than any other "Dried Perfume" ever introduced; over **500,000 PACKETS HAVE BEEN SOLD.**

Chemists are unanimous in declaring that "**PETAL DUST**" is the best selling novelty ever offered. **PETAL DUST** is used in the State Rooms and Cabins of all the principal Steamship Companies' Vessels as an Air Purifier.

HUNDREDS OF TESTIMONIALS HAVE BEEN RECEIVED.

PRICES.

3d. Size, in Boxes containing 3 dozen	...	...	...	...	6s. 0d. per box	} Net.
6d. " " "	1	"	...	...	3s. 6d.	
1s. " " "	1	"	...	...	7s. 0d.	

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Where all communications must be addressed.

CITY DEPOT—H. C. QUELCH, 19 LUDGATE HILL, LONDON, E.C.



A GOING WINTER LINE.



MONRO'S ELECTRIC SOLES

Sell freely when displayed on the counter.

MONRO'S ELECTRIC SOLES

Are a positive remedy against cold feet.

MONRO'S ELECTRIC SOLES

Should be stocked by all Chemists—they are going.

MONRO'S ELECTRIC SOLES

Generate heat and are wonderfully comfortable.

MONRO'S ELECTRIC SOLES

Sell well, give no trouble, and are not cut.

MONRO'S ELECTRIC SOLES

Cause a glow to pervade the whole system.

MONRO'S ELECTRIC SOLES

Are sold at 4s. per dozen pairs in Show Boxes.

MONRO'S ELECTRIC SOLES

Can be had from all Wholesale Houses.

MONRO'S ELECTRIC SOLES

Sample dozen sent post free for 4s. 6d.

MONRO'S ELECTRIC SOLES

Are really worth introducing: they always sell.

MONRO'S ELECTRIC SOLES

Can be seen at Messrs. Edwards & Son's, Queen Victoria Street, London.

MONRO'S ELECTRIC SOLES

Both sell well and pay well, and give entire satisfaction to the wearer. What more can be desired?

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WRIGHT'S MYRRH TOOTH SOAP.

The Most Elegant Dentifrice on the Market.

REMOVES TARTAR. PRESERVES THE ENAMEL. PREVENTS DECAY.
GIVES PEARLY WHITE TEETH. HARDENS & STRENGTHENS
THE GUMS. CURES OFFENSIVE BREATH. A GEM FOR THE TOILET.

Put up in an attractive manner for show case display, and contains in a modified form the medicinal properties of Myrrh. It is an elegant saponaceous Dentifrice, absolutely pure, containing no mineral or acid substance, and no ingredient entering into its composition is in the least degree harmful or unwholesome.

ENDORSED BY THE HIGHEST DENTAL AUTHORITIES.

A Professor of Clinical Surgery in the Dental College at the Michigan State University says:
GENTLEMEN—I am satisfied from a careful examination of your Myrrh Tooth Soap that it contains nothing injurious to the Teeth. I am using it, and consider it a most excellent dentifrice.—J. A. WATLING, D.D.S., Ann Arbor, Mich., U.S.A., March, 1888.

Professor J. TAFT, of the Cincinnati, Ohio, U.S.A., and Michigan, U.S.A., Dental Colleges, and also author of "Taft's Operative Dentistry," and editor of the "Dental Review," states: I have used your Myrrh Tooth Soap for several months, and am free to say that I am much pleased with it. So far as I know it has no superior if an equal in the preparations of this kind. To none of the materials used in its composition can any objection be made; indeed, they are the materials largely used in the preparation of dentifrices generally. You have certainly succeeded in producing a most excellent dental soap.

Yours very truly, J. TAFT.

PRICE EIGHT SHILLINGS PER DOZEN.

Can be obtained of

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KENNEDY COMPANY'S ARNICA TOOTH SOAP

Perfumes the Breath, Whitens the Teeth,
and Strengthens and Preserves the
Gums.

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OPHTHALMIC
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For the rapid cure of diseases
of the Eye without operation.

ALL CHEMISTS SHOULD KEEP IT.

PRICE LIST SENT ON DEMAND.

New method of curing diseases of the Eye
without operation, by E. POMIES, Oculist,
late Surgeon in the French Army, &c., sent on
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Positively forces the HAIR, WHISKERS, and
MOUSTACHIOS to grow heavily in a few weeks with-
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moustachios it has never been equalled. As a curer of
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1/-, 2/6, 3/6, and 5/6 per Bottle.

NOTICE.—Show-cards and Circulars, Terms, and all other Particulars may be had by writing direct to us,

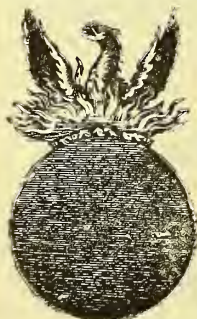
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IN ALL THE ART SHADES.

For all kinds of decoration on Wood or Iron. Dry
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WHITE LEAD, ZINC WHITE,
PAINTS & COLOURS OF ALL KINDS.

MIXED PAINTS READY FOR USE,
In Tins, 1, 2, 4, 7, and 14 lbs. each.

HIGH-CLASS VARNISHES

Of all kinds, for Coachbuilders, Decorators, &c.
OIL BOILERS REFINERS, & MERCHANTS
Ez. or Orders receive special and prompt attention.

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ASSOCIATION for the SUPPLY of PURE VACCINE LYMPH,
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SOLE AGENTS FOR DR. WARLOMONT'S CALF VACCINE.

Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 5s.
HUMAN VACCINE, from healthy children only, microscopically examined and
source quoted. Tubes, two-thirds full, 18. 5d. each; Tubes one-third full and Lan-
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A Copy of this Supplement is inserted in every number issued of "The Chemist & Druggist."

The Chemist and Druggist

SUPPLEMENT

Businesses Wanted.
Businesses for Disposal.
Premises to Let.
Auction Sales.

SATURDAY, OCT. 26, 1889.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

This Supplement will be given free to any Chemist and Druggist or Assistant who will call for it at 42 Cannon Street on Friday afternoon, or will be posted on Fridays to any one who sends an addressed postal wrapper.

OFFICES: 42 CANNON ST., LONDON, E.C.

ADVERTISEMENTS for this Supplement can be received on FRIDAY MORNING, first post, though it is requested that these may be sent in as early in the week as possible.

EXCHANGE COLUMN ADVERTISEMENTS will appear on page 12 (bottom folio), and must be received not later than THURSDAY AT NOON, to appear in the issue of the Saturday following.

All Advertisements for this Supplement and Exchange Column must be prepaid. Remittances payable to EDWARD HALSE and crossed MARTIN & Co.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

CHEMISTS' TRANSFER AGENTS,

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4. **£1,200.—LINCOLNSHIRE.**—General Retail and Mixed Business, established over 50 years; returns £1,200 yearly, with good profits; large shop, well fitted, good stock; about £850 required.

5. **£550.—EASTERN COUNTIES**—Unopposed good-class Retail and Dispensing Business; returns nearly £550; large double-fronted shop and good stock, convenient house, good garden, &c.; about £500 required.

6. **£1,000.—DERBYSHIRE.**—Fashionable town; Retail and Dispensing; all first-class trade; returns over £1,000; well-stocked shop, and good house, on lease; terms, valuation only required—no premium.

7. **£450.—SURREY.**—Unopposed country Business of good class; returns about £450 yearly; can be much increased; newly-fitted shop and good stock; convenient house and good garden; price about £350.

8. **£700.—SUSSEX.**—Attractive locality; first-class Country trade returns last year nearly £700; single-fronted well-fitted shop and good stock; large house; rent £34; price about £600; reasonable offer considered.

9. **600.—ISLE OF MAN.**—Retail and Dispensing Business; very profitable; no cutting; returns nearly £600 yearly; expenses very low; price £400; no qualification necessary.

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13. **£800.—PLYMOUTH.**—Good-class old-established Retail and Dispensing Business; held by the vendor 20 years; returns £800 yearly, with good profits; well fitted corner shop and good stock; good house attached; price about £475; worth attention.

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N.B. NO CHARGE TO PURCHASERS.

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TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION. Messrs. Orridge & Co. invite communications from COLONIAL and FOREIGN firms where business of a confidential nature requires the especial attention of a London agent.

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References to principal London and Provincial Wholesale Houses, also to numerous clients throughout the United Kingdom.

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GOOD Mixed Retail Cash Drug trade in the Midlands; capital house and business premises on lease; net profit £240; price £500; no agents. A3, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.O.

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A BARGAIN to immediate purchaser for cash; 12 miles from town, lovely country; increasing population; no opposition; cash price £150; full explanation re disposal. Apply by letter, B. K., Heaton & Co., 5 Coleman Street, E.C.

CHEMISTS Retail; London, S.E.; 40 years in hands of present proprietor; main thoroughfare, populous district; returns £500; much neglected owing to ill health; good house; rent £30; 6 years unexpired; price £550. Apply, 189 High Street, Deptford.

TO Chemists and Dentists.—To be sold, an old-established Business in the North of London; a rare opportunity for anyone that can carry on the two branches, Dentistry having been carried on for over 18 years. Apply for particulars to Mr. T. Martin, 11 Aldersgate Street, E.C.

FOR SALE, the Business of a retiring Pharmaceutical Chemist and Surgeon Dentist in commanding position in the neighbourhood of Sloane Square; valuable lease of premises (at low rental) can also be bought. Apply, P. Shaw, Solicitor, Old Sargeant's Inn, Chancery Lane, London.

A **PRESCRIBING** and Dispensing Business, situate in the main thoroughfare of an East Coast port and seaside resort of increasing popularity; one opponent; a capable and energetic man would find here an excellent opportunity. Apply to Barton & Son, Solicitors, Great Yarmouth.

CHEMISTS or Surgeons.—The proprietor of a Chemist's Business is desirous of retiring after 42 years' steady trade; special preparations; advantageous terms furnished on personal application to any gentleman having the necessary means. Address, Y. Z., Miss Atkinson, 40A King William Street, London, E.O.

SOUTH Wales.—In Market town, a thriving Dispensing, Wholesale, and General Business; returns £1,100; splendid stock; trade steadily improving; rent £30; price £600 or valuation; satisfactory reasons for disposal. Full particulars from "Silurian," care of Barron, Harveys & Co., Giltspur Street, E.O.

A **GENUINE** Business is for sale in one of the best market towns in the South of England, returning £650, bearing excellent profits; low rent; good house attached; very old-established; genuine reasons for leaving; price £450 to an immediate purchaser. "Civet," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

D **ISPENSING** and Light Retail Business, situate within 15 miles of town, to be disposed of on exceptional terms; returns are £1,000; full prices except patents; fine house and small garden; price £750; £500 down, balance by instalments; splendid chance for young man. J. H. W., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WEST RIDING.—For immediate disposal on reasonable terms, old-established Dispensing, Prescribing, and superior General Chemist's Business, situated in central position, good manufacturing town; in present hands 21 years; now returning nearly £800 under management; rent moderate; large convenient shop. For particulars, "Statim," Tanycord, Park View, Harrogate.

MR. SYDNEY GREENWOOD,

Chemists and Druggists' Transfer Agent, Valuer to the Drug and Allied Trades,

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1. **KENT COAST.**—Fashionable town; returns £1,500; old estate, doing good cash trade; large house and shop, well fitted up, and good stock; price £650 cash; owner retiring.

2. **SOUTHEND (NEAR).**—Growing district; returns £350; good Agricultural and Prescribing trade; full prices; double-fronted well-fitted shop; rent £31; good house; price £300 (or offer); stock valued £200.

3. **LINCOLNSHIRE.**—Returns £1,000; rent £55; well-fitted shop; nice 9-roomed house; full prices; stock worth £500; old-established, and in good town; price £800; chance seldom met.

4. **LONDON, W.**—Good residential locality; returns £1,000; high-class cash trade, full prices; rent £55; shop is handsomely fitted, and well stocked; 8-roomed house; price only £500.

VALUATIONS

A Speciality. Write for terms and appointment to Mr. SYDNEY GREENWOOD (as above).

BUSINESSES FOR DISPOSAL—Continued.

SCARBOROUGH.—For sale, a Chemist's Business, Shop and Dwelling House, in a central and thickly-populated part of the town; a rare opportunity for anyone desirous to commence business; rent low; incoming for stock and fixtures moderate; immediate possession. Apply, R. Spencer, 27 Queen Street, Scarborough.

HANTS.—A good-class Light Retail and Dispensing Business for disposal, returning £400; corner shop, well situated in main street; handsomely-fitted and well stocked; good house, private door; rent low; owner retiring; to bond-fide purchasers full particulars. "Veritas," Messrs. Meggeson, Upper Thames Street, London. No agents.

PROPRIETOR will sell old-established Business a bargain, or treat with gentlemen of moderate capital (qualification unnecessary) to join him in converting it into the store system; exceptional opening for this profitable class of investment; good-class country town; no opposition for 20 miles. "Medicus," 42 Castle Street, Shrewsbury.

NOW, Assistants, here's a Chance.—£70 buys a good Shop, newly fitted, good stock of drugs and sundries, shop rounds, carbons, gas-fittings, utensils, &c., year's goodwill; house, 8 rooms, redecorated. 3 years' agreement, £45; long garden; doing £3 week; owner unqualified or could double; must sell. Scott, Torriano Avenue, Camden Road, N.W.

TO Beginners.—Old-established good populous village Light Retail, Prescribing, Agricultural Trade (not Mixed); very profitable; for sale cheap; in Kent; nearest Chemist 6 miles; six-roomed house; rent, &c., £16; been under management; with ordinary care can be doubled; small vine, greenhouse. Particulars, "Vine," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

A **CHEMIST**, in a country town, Midlands, wishes to dispose of his Retail, Dispensing, and Prescribing Business; about £700 required; nearly all full prices. At the same time he wishes to meet with an engagement to Manage a Store, or some position of trust, in a city or large town; sole reason for disposing of business. No agents, and only cash buyers treated with. "Ronda," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

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WANTED, small Business, payable by instalments, small deposit given, by energetic man, Prescriber and Dispenser. W., 113 Riversdale Road, Highbury, N.

WANTED to purchase, by a Doctor, a Dispensary or small Chemist's shop where there would be an opportunity of establishing a practice; in London preferred. Address, "Doctor," 256 Liverpool Road, London, N.

WANTED, good paying Light Retail, returning not less than £800, or will entertain Partnership in larger concern, or where principal wishes to retire in a year or two. "Radix," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, Seaside Business, where from £500 to £700 can be profitably invested, within an hour or two of London preferred, but any bond-fide concern would be considered. "Seaside," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ADVERTISER, having sold his business in London, is desirous of purchasing, for cash, a genuine Country Business, in a small town or large village, in any healthy locality; cash to invest £400 to £700; must bear investigation. Full particulars, in confidence, to "Country," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SALE BY TENDER.

RECHERCHE Investment, Peckham Rye, S.E. (owner going abroad).—Mr. Sydney Greenwood, Chemists' Transfer Agent and Valuer, has been instructed to **SELL** by **TENDER**, in One Lot, as a going concern, the equity of redemption, valued at £200, goodwill, stock and fixtures of the Chemist's Business situate at 2 Exchange Buildings, East Dulwich Road, S.E.; shop is handsomely fitted in mahogany relieved with ebony, and is well stocked; P.O. attached; net profits average over £340. Tenders received up till October 31, 1893 (unless sold by private treaty), by Mr. Sydney Greenwood, Pittville House, Lea Bridge Road, Clapton, county of London. Forms and full printed particulars sent free on application. Chemists are invited to view this before deciding elsewhere.

FOR SALE.

500 YARDS vacant Building Land; all or part for disposal; handsome street, in rapidly-increasing Lancashire town; no Chemist near; good opening for one, or for stores or any business requiring good showing facilities; reasonable prospect for good business and improvement in value. Address R. 31 Scotland Road, Nelson, Lancashire.

TO CHEMISTS Fitting-up or Making Alterations.—For Sale, 18 range of mahogany-fronted drawers, gold-labelled, nearly new, £9. The entire fittings of a shop, part new, £42 10s.; 5 8-gall carboys with out stoppers, 45s.; one 6 ft. of ebonyised dispensing screen, mirror centre, £6; a complete set of gold-labelled bottles and jars, £9; 12 second-hand 4 lb. blue jars, gold labelled, 30s. R. Tomlinson & Sons, Bond Street, Birmingham.

TO LET.

TO LET, a capital House and Shop in main road; suitable for a Chemist and Druggist; rent £45. Apply on the premises, 47 Kensal Road, Westbourne Park, Paddington, W. Two minutes from Station.

SHOP, hold corner; handsome plate-glass fronts; Chemist and Druggist, Dispensary, Surgery, and Dentist; best position in North London, 207 to 217 Pentonville Road, near King's Cross, Midland, and Metropolitan Station; immense traffic, and a colonnade of pavement lamps will be fixed; rent £60. Mr. Williams, Printer, 231 Pentonville Road, N.

APPRENTICESHIPS.

WANTED to place (indoors) a well-educated Youth, aged 17 years, as Apprentice; passed Preliminary. State full particulars, to save correspondence, to 39 Great Bolton street, Blackburn. Correspondents not answered in four days declined.

APPRENTICE.—A. Smith, Chemist, 5 High Street, Newport, Mon., has a vacancy for a youth who has passed the Preliminary examination; late pupil gained the Pharm. Soc.'s Silver Medal for the best Herbarium; moderate premium required.

SITUATIONS OPEN.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, November 14, Junior to manage branch shop; time for study; references. Salary required with photo, W. A., Thorne, Yorkshire.

LABORATORY.—Strong lad wanted, used to general laboratory work. T. Hodgkinson, Prestons & King, 81 Bishopsgate Street Without, E.C.

A THOROUGHLY good Junior (outdoors); must be a quick and obliging counterman. State salary and references to Blunt's Drug Store, Coventry.

JUNIOR Invoice Clerk wanted, for the Wholesale. Apply, stating full particulars, to "Invoice," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

PACKER wanted at once for export work; must be thoroughly experienced and trustworthy. Lorimer & Co., Britannia Row, Islington, N.

WANTED, an Assistant for good-class Retail and Dispensing Business; outdoors. State all particulars, with photo, South-Eastern Drug Company, Folkestone.

WANTED, at once, a Junior Assistant; others kept. Apply, stating age, height, experience, and salary required, with photo (to be returned), and testimonials, to Thomas Sellors, Coventry.

J. G. SHIRLEY & SON, of Westbourne Grove, Bayswater, are in want of an Assistant, who must have Minor qualification, and be used to good-class trade; personal application preferred.

JAMES WOOLLEY, SONS & CO., Manchester, have a vacancy for an Assistant possessing a knowledge of Surgical Instruments and Scientific Apparatus. Apply by letter with full particulars,

INVOICE Clerk.—Wanted, for a good Country Wholesale, an Invoice Clerk; he must be quick and accurate. Apply, "Rus," care of Brown's Advertising Offices, 163 Queen Victoria Street, London, E.C.

IMMEDIATELY, qualified Assistant (indoors); Thursday half-holiday; no Sunday duties; state salary and all usual particulars, enclosing photo (which will be returned). A. B. Frost, Beeston, Notts.

WANTED, an Assistant, accustomed to Country Retail; able to Prescribe, Extract Teeth, and take charge when required; comfortable home and short hours. Full particulars and photo to J. H. Richardson Alresford, Hants.

JUNIOR Assistant (indoors) for Drug counter; able to Dispense; good address. Apply, with full particulars as to references, age, height, salary required, and photo (to be returned), to Tribe & Lamb, Chemists, Chatham.

MANAGER for Branch, for General Retail, with Tooth Extraction and Prescribing; indoors; must have good references. Apply, stating age and other full particulars, to J. Lees, Chemist, Lees Road, Oldham, Lancashire.

ASSISTANT; aged about 22; accustomed to good Country Retail, Dispensing, and Agricultural business; moderate hours; no Sunday, duty. Apply, stating age, height, salary, references, and enclose carte (returned), to W. Boor, Wisbech.

INVOICE Clerk wanted; must have knowledge of the Drug trade, and be a good and quick writer. Vacancy also for Office lad. Write stating salary required, age, &c., to "Cortex," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TRAVELLER on Commission wanted; one for the North of England, another for Ireland and Scotland, to represent first-class Perfumery house. Barnett & Co., Broad Street, Birmingham. Can introduce good Druggist Sundry house requiring representative.

WANTED immediately, for Wigan, an Indoor Assistant, about 25 or 30, for Mixed Business; must be able to prescribe and extract teeth; abstainer preferred. Apply, with references (and photo if convenient), stating age, salary, &c., to Wm. Aspinall, The Pharmacy, Ashton, Newton-le-Wilows, Lancashire.

AN Assistant for a Light Retail, Prescribing, and Dispensing Business, with a view to purchase; none need apply who do not mean business; must be pushing and obliging; being a mutual arrangement, salary will be accordingly. State full particulars to "Statim," 12 Middle Street Avenue, Southampton.

WANTED, about the middle of November, a good Junior Assistant (outdoors), to partly manage a branch; no heavy or dirty work; ample time for study; would suit one reading for examination. State salary, age, height, full particulars and references to Wm. Sheppard Poll, Pharmaceutical Chemist, Great Yarmouth.

WANTED, a reliable Assistant for a Mixed Country trade; able to Prescribe, Extract Teeth, and take charge when required; one with a knowledge of Mechanical Dentistry preferred. Apply, with full particulars, and enclose photo (returnable), to "Dens," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, at once, an active and obliging Junior in a Mixed Wholesale and Retail Chemist and Bookseller's business; one seeking a permanency preferred; outdoors; hours 7.30 to 8; no Sunday duty; an apprentice kept. Apply, stating age, references, salary, and full usual particulars, to Crowder & Son, Barton-on-Humber.

INDIA.—Required a Chemist's Assistant, who has passed the Minor; 3 or 4 years' agreement; salary for 1st, 2nd, 3rd, and 4th years respectively, 150 rs., 200 rs., 225 rs., and 250 rs. per month, and lodging provided; aged 26 to 28; passage paid. Address, stating qualifications and giving references, to S. 414, Deacon's Advertising Offices, Leadenhall Street, E.C.

NOW or at an early date, a careful Junior (fresh from a good apprenticeship no objection); abstainer and non-smoker. Applicants minimising correspondence and facilitating choice by enclosing photograph and fullest particulars—as to age, height, salary required, when at liberty, experience, and reference—to A. Nicholson, Tunbridge Wells, will be first answered.

A MARRIED man, who would accept free rental of four rooms, kitchen, and gas, over Chemist's shop, in a leading suburban thoroughfare, for a little daily help, and care of premises; no other residents. Address, "Mutual," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

DISPENSER, Surgeon or Chemist; good references. J., 40 Philpot Street, E.

AS Assistant; aged 26; Minor qualification; 5ft. 10½ in. A. E. Beard, Newport, Essex.

IMPROVER: good experience and tall. Apply to "Prelim," Merton Lodge, Denmark Hill.

ASSISTANT (28); permanency. C. L., 15 Richmond Road, Shepherd's Bush, W.

SCOTCH and Irish Traveller can accept additional agency. S., 95 Albany Street, N.W.

ASSISTANT: West End experience; competent; aged 24. "Salol," 11 Chandos Street, Keighley.

MANAGER or Senior; temporary or permanent; aged 37; qualified. 13 Spring Gardens, Buxton.

IMPROVER (outdoors); London preferred; small salary; aged 24. R., 2 Horton Road, Hackney.

BRANCH MANAGER (28); Prescriber, Extractor. "Chemicus," Temple News Rooms, London.

JUNIOR: 6½ years' experience: Photographic Chemicals understood. Curt, The Willows, Stourbridge.

PART-TIME in London; 23; disengaged; abstainer. Morris, Frederick Place, Clifton, Bristol.

ASSISTANT: aged 30; Mixed Country Business. "Chemicus," 300 Perobello Road, Notting Hill.

ASSISTANT: West End experience; good references; aged 25. J. E. Stansfield, Leeds Bridge, Leeds.

AS Assistant; Mixed or Agricultural business; good references. "Chemicus," Hart, Painswick, Stroud.

OUTDOORS: Nottingham or district; qualified; experienced. T. W. L., 13 Queen's Walk, Nottingham.

ASSISTANT, in or near London; 8 years' experience; disengaged. "Student," 193 High Street, Goring-on-Stone.

AS Junior; aged 20; in good-class trade; 5½ years' experience; good references. W., 63 Chorley Old Road, Bolton.

MANAGER or Assistant (27); temporary or otherwise. "Medicus," 105 Guildford Street, Russell Square, London.

LOCUM-TENENS: disengaged November 2; Minor qualification. "Xylem," 7 Claremont Road, Sparkbrook, Birmingham.

TEMPORARY, during absence; long experienced; gentlemanly address; moderate terms. "Ph.," 39 Powis Square, W.

TEMPORARY or Permanent; aged 26; highest references; experienced. "Chemicus," 179 High Street, Bromley, Kent.

LOCUM-TENENS: abstainer; experienced; ability and integrity. "Veritas," 10 Bond Street, Higher Broughton, Manchester.

LOCUM-TENENS: qualified; (40); would arrange part time to get up stock or otherwise. G. Williams, 70 Ledbury Road, W.

AS Assistant; 9 years' experience; aged 25; height 5 feet 10 inches; disengaged. C., 14 Princes Square, Kennington Cross, S.E.

AS Assistant in good-class Business; good references; Minor qualification. J. E. French, 11 Westfield Terrace, Fulham, S.W.

JUNIOR: London or suburbs preferred; 4½ years' experience; aged 19½. Davies, 47 Upper George Street, Edgware Road, W.

ASSISTANT, Senior or Managing, with view to succession; aged 29; thoroughly experienced. H., Mr. Pavne, Chemist, Market Rasen.

ASSISTANT or Branch Manager; 25; tall; married; prescribe and extract; disengaged. "Chemist," 39 Crown Terrace, Richmond, Surrey.

ASSISTANT or Dispenser; high-class provincial and seaside experience; Midlands or West-End preferred; aged 23. "Chemicus," Conway.

ASSISTANT, or Management of small country Branch; moderate salary. X., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MANAGER or Assistant; qualified; 18 years' experience; aged 33; single. S., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

JUNIOR, London; Dispensing preferred; references; aged 23; three years' character at last situation. W., 174 Derby Road, Southampton.

ADVERTISER (28), 6 feet, unqualified, married, *sine* encumbrance, thoroughly experienced and useful, seeks suitable berth. W. Membury, Yeovil.

MANAGER or Temporary; aged 30; height 5 feet 8 inches; good tooth extractor and prescriber; disengaged. William, 44 Linver Road, Fulham.

BRANCH MANAGER or Assistant; unqualified; 37; married; five family; 5 ft. high; mixed country preferred. R., Brook Cottage, Southam.

M. R. E. M. HALL, who represented Messrs. Bourne, Johnson & Latimer for some years in England, and who has been travelling for them in the Australasian Colonies, is again in London, and open to accept two or three commissions to represent firms in the colonies in connection with the above house. Communications to 21 Gower Street, W.C.

MANAGER or Assistant (outdoors); qualified; aged 28; Prescriber and Teeth Extractor. "Chemist," 57 Welbeck Street, Chorlton-on-Medlock, Manchester.

SOUTH Africa or Australia, or abroad; Manager or Assistant; 16 years' experience; qualified; aged 30; single. B., care of F. E. Parlour, 23 Billiter Street, E.C.

ENERGETIC Assistant; disengaged; unqualified; agriculture and general experience; excellent references; abstainer; salary £40 (indoors). "Hydrarg," 32 High Street, Uxbridge.

ADVERTISER desires situation in the office of Wholesale Druggist or Manufacturer; good and quick penman; over 5 years' experience in Drug trade. Nixon, 9 English Street, Carlisle.

A CHEMIST is desirous of placing his son out as Improver where he will have a comfortable home; has had 3 years' practical experience; good address and obliging; good counterman; aged 18; height 5 feet 10 inches. C. Griffith, Chemist, Canterbury.

WANTED, situation as Manager, Locum-Tenens, or permanency; undeniable references; 12½ years' experience; well up in dispensing, prescribing, laboratory work; tall, good appearance; good organizer; salary 30s. week. Griffin, 39 Prince of Wales Road, Norwich.

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Special charges are made for Advertisements under this heading, which can be obtained on application.

DENTISTRY.—First-class Mechanical work undertaken for the Profession at moderate terms; good West-end references as to ability, &c.; punctuality guaranteed. W. E. Hill, 220 High Holborn, W.C.

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ALL Students who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tully (Hills Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. Student's Herbarium, 100 specimens, 7s. 6d., post free.

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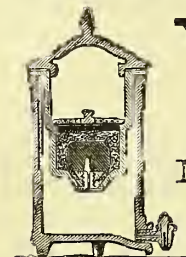
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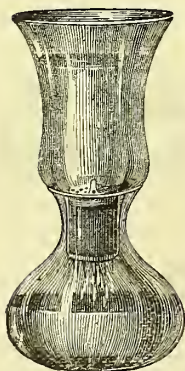
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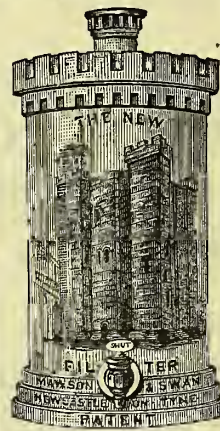
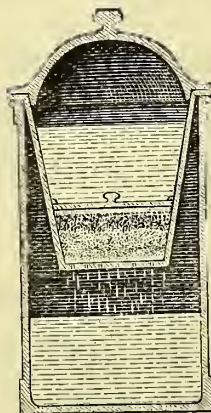
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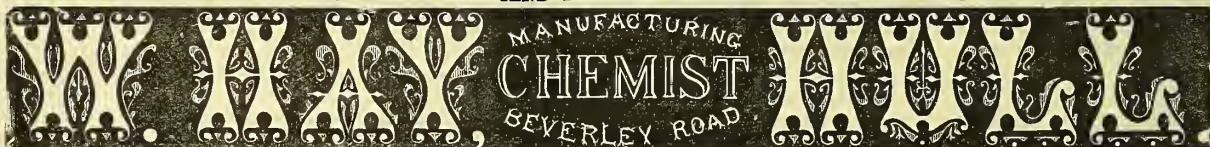
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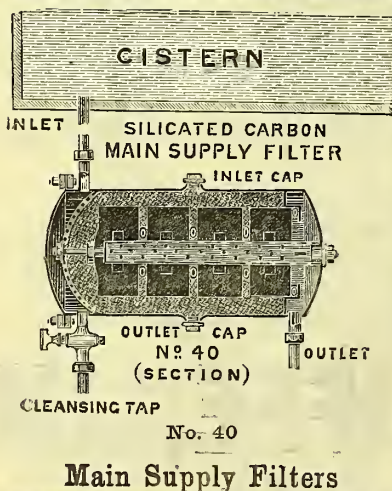
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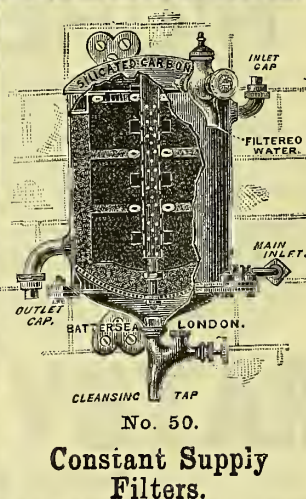
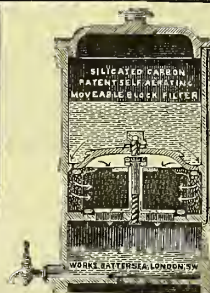


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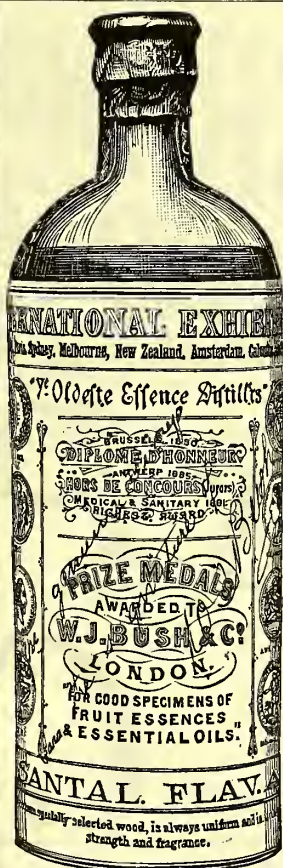


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DIRECT IMPORTATION.
Specially Selected.

It is imperative that Chemists and others requiring Essential Oils for medicinal purposes should purchase genuine and finest qualities only. These can only be obtained from W. J. BUSH & CO., who supply them as above, in 1-lb. Bottles, and guarantee their quality and purity. *Nearly all Essential Oils offered in the Market are impure.*

W. J. BUSH & CO.
MANUFACTURING CHEMISTS, DRAWERS OF ENGLISH ESSENTIAL OILS,
Artillery Lane, LONDON. Works—Ash Grove, HACKNEY.

[2]

HIGHEST AWARD AT THE INTERNATIONAL EXHIBITION, LONDON, 1885.
TRADE MARK Registered May 21st. 1887.

THE PIONEER TEMPERANCE BEVERAGES—*Ch. Eng. Temp. Chron.*

BECKETT'S

FRUIT SYRUPS & CORDIALS

MILD DRINKS.
Cherry. Raspberry.
Strawberry. Lime Fruit
Black Currant. Lemon.
Orange. Jargonelle Pear.
Pineapple.
Raspberry Vinegar.
Orange and Quinine.

HOT DRINKS.
Winterine. Honey Liqueurs
Aromatic Black Currant.
Gingerette. Ginger Lemon.
Peppermint. Clove.
Elderberry. Syrup of Hops
Lime Fruit Cordial.
Raspberry Cordial.

"First-class beverages."—*The Grocer.*
"Have an established reputation."—*Nonconformist.*
"That Beckett's Fruit Syrups are equal to what their proprietor claims for them is proved by the fact that they are largely used in Coffee Houses throughout the country."—*Coffee Public House News.*

"Delicious beverages."—*Scottish Good Templar.*
"Beckett's Fruit Syrups are not to be excelled."—*Anti-Adulteration*
"All Mr. Beckett's preparations are most tastefully bottled and labelled, and their bright appearance makes them ornamental to the shelves of the Confectioner and Temperance Hotel-keeper."—*Good Templar Watchword.*

Analytical Reports from GRANVILLE H. SHARP, Esq., F.C.S.; G. BOSTOCK, Esq., F.C.S.
Price Lists, Testimonials, and other information sent post free on application to the Manufacturer—**W. BECKETT, Heywood, Manchester.**

To H.R.H. The Prince of Wales, The Empress of Germany, &c.

BRAND & CO.'S
PEPTONES
OF
BEEF,
MUTTON,
VEAL,
AND
CHICKEN.

BRAND & CO'S.

SPECIALTIES FOR INVALIDS.

CONCENTRATED
BEEF TEA, VEAL,
MUTTON & CHICKEN BROTHS;
TURTLE SOUP & JELLY, CALF'S FOOT,
JELLY, MEAT LOZENGES

ESSENCES
OF BEEF
MUTTON
VEAL
AND
CHICKEN

SOLE ADDRESS,
11 LITTLE STANHOPE STREET, MAYFAIR, W.

Fry's Pure

To secure this article
ask for
Fry's Pure
CONCENTRATED

Cocoa



NESTLE'S MILK FOOD FOR INFANTS.

ALSO WELL ADAPTED FOR CHILDREN AND INVALIDS.

Prepared at **VEVEY, SWITZERLAND.**

The only Perfect Supplement and Substitute for
Mother's Milk.

Easy of Preparation—requires merely the addition
of water.

UNIVERSALLY RECOMMENDED BY PHYSICIANS.

BY ROYAL LETTERS PATENT.

HASSALL & CO.'S PHOSPHO-CITRIC ACID

Is the Best, Purest, and most Economical Agent for Acidulating all Saccharine Beverages.

Price only **10d.** per lb., in 9 and 18 gallon casks ; **1s.** per lb. in small quantities.

One Ounce Measure is equal to One Ounce of Citric. It produces a higher class Beverage, and shows an economy of between £6 and £7 per cwt.

We do not ask for an order, we merely solicit the favour of a trial.

3-oz. Sample for Postage (3 stamps), or 14 lbs. on approbation.

PAMPHLET GRATIS.

UNSOLICITED TESTIMONIALS.

We are pleased to be able to testify that your Phospho-Citric Acid is satisfactory under the most severe trials. We have placed Manufactured goods in which your Acid was used in a refrigerator for months, and also for nine months in a stove in which the temperature stands at over 150° day and night, and the bottles when examined to-day were as bright as the day they were put in.

LEMON STREET, ABERDEEN.

I have pleasure in bearing testimony to the fact that first-class waters are produced, with greater body and finer fruity flavour, at half the cost of Citric ; and further that your Acid is free from all traces of **LEAD**, generally found in the crystals.

I am persuaded that your Acid will ultimately command the Mineral Water Trade.

Yours faithfully, WM. THOMSON.

"And may I also be permitted to add my testimony to the excellence of your Phospho-Citric Acid ; I consider it far and away preferable to Citric."

C. H. ORTON, STOKE GOLDING.

FERMENTATION.

When Fermentation is present, Saccharine Beverages made with this Acid will keep sound and bright several days longer than those made with Crystal Acids.

HASSALL & CO.
YORK ROAD, KING'S CROSS, LONDON.

TELEGRAMS:—"REMPUJARON LONDON."

BRAGG'S

Sold in Powder, 2/-, 4/-, and 6/- bottles; also in Biscuits, 1/-, 2/-, and 4/- tins (Children like these), and in Lozenges, 1/1½ tins (portable and convenient).

Undoubtedly the most natural preventative and curative agent in all cases of Indigestion, Disorders of the Liver, Fevers, Cholera,

Dysentery, &c.

The trade cannot do better than keep these old-established and safe preparations under the notice of their customers.

**VEGETABLE
CHARCOAL.**

SOLE MANUFACTURER—

J. L. BRAGG, 14 WIGMORE ST., LONDON.**“MYRTLE GROVE” TOBACCO***In 1-oz., 2-oz., and 4-oz. Packets, and ¼, ½, 1 lb. Tins only.***TADDY & CO., 45 Minories, LONDON**

ESTABLISHED 150 YEARS,

SNUFF, TOBACCO, AND SEGAR MANUFACTURERS.

Write for List of Specialities.

TOBACCO**CIGARS & CIGARETTES.****M. & R. PEACOCK,**
Tobacco, Cigar, & Cigarette
Manufacturers,
KINGSLAND RD., LONDON, N.E.Sole Manufacturers of the Celebrated
Brands—**“ROYAL CHARTER”**

AND

“UPPER CRUST.”

Sold in Packets only.

Those who deal in these Goods, or intend doing so
should write to the above Manufacturers for
Price List.

PEPTONATE OF IRON

SOLE MAKERS



DENAEVERS PEPTONES CO. LONDON

PEPTONE OF MEAT

DENAEYER'S

LIQUID PEPTONES

STERILIZED

Free from microbes!
Keep good for ever in all Climates.
118 BISHOPSGATE STREET WITHIN, LONDON, E.C.

DENAEYER'S PEPTONATE OF IRON. A bland, non-irritating and most easily assimilable ferruginous preparation. For debilitated constitutions, children, and aged people.

DENAEYER'S PEPTONE OF MEAT. A powerful restorative for all ailments of the stomach, stimulates general nutrition. Is retained when the stomach rejects all other food. Pleasant to taste.

Of all Chemists and Wholesale Houses.

JEWSBURY & BROWN'S
(MANCHESTER)
SPARKLING TABLE WATERS,
UNRIVALLED FOR PURITY AND QUALITY.

SODA WATER.
SELTZER WATER.
POTASH WATER.
LITHIA WATER.
SIMPLE
AERATED WATER.



LEMONADE.
GINGER ALE.
QUININE TONIC.
GINGER BEER.
HOREHOUND BEER

EXTRACTS FROM ANALYTICAL REPORTS.

"The examination of the Waters which I have made has satisfied me that they have been prepared with the greatest care, and are of excellent quality."

FRANCIS JONES, F.R.S.E., F.C.S.

"On the whole, I have no hesitation in stating that your Aerated Waters are of the highest standard of purity which is practically attainable."

LOUIS SIEBOLD, F.I.C., F.C.S.

J. & B.'s Syphons are mounted with PURE BLOCK TIN, thus ensuring absolute immunity from dangerous metallic contamination.

CARRIAGE PAID AND ON RETURNS.

113 MARKET STREET, and 44 DOWNING STREET, MANCHESTER.

CATLEY ABBEY.

THE

ONLY BRITISH NATURAL SELTZER.

Strongly Recommended by the Medical Faculty. Unequaled as a Table Water.

Opinions of eminent Medical Men and Lancet, together with Price List, also detailed Analysis by Professor ATTFIELD, Ph.D., F.I.C., F.C.S., forwarded upon application to the Company.

SLEAFORD, LINCS.

JOHN OWEN, JUNIOR,

PACKING CASE MANUFACTORY AND STEAM SAW MILLS.

ESTABLISHED 1840.

37 & 38 MINORIES, LONDON, E.C.

MANUFACTURER OF

Cases of every description for Home use and Exportation.

Wine Laths, Oak and Deal.

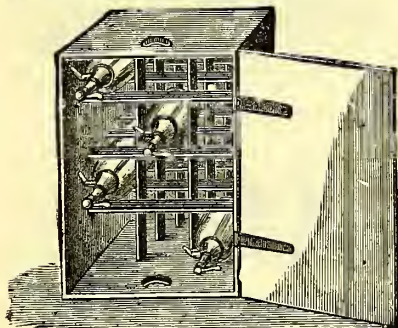
Mineral Water Bin Cases and Trays.

Bottle Crates, Straw Envelopes.

Cases Lined with Tin, Zinc, Copper, &c.;

ALSO MANUFACTURERS OF THE

"Acme" Incubator & Poultry Appliances.



PRICE LISTS FORWARDED ON APPLICATION.

EXPORT ORDERS RECEIVE SPECIAL ATTENTION.



ROBINSON'S LIEBIG'S BEEF WINE.

Composed of Liebig's Extract of Beef, Extract of Malt,
and sound Port Wine.

REPORT ON BEEF WINES.

From the results of my Analyses of various Beef Wines I have had occasion to examine, none have equalled as regards strength, purity of ingredients, and (of no less importance) the skilful and judicious manner in which the respective ingredients have been proportioned and combined, the Liebig's Beef Wine manufactured by Mr. B. ROBINSON, of Pendleton, Manchester.

It is in every sense a reliable preparation, embodying in a pleasing and palatable form all the acknowledged medicinal and nutritive properties pertaining to Liebig's Extract of Meat, Extract of Malt, and sound Port Wine.

WILLIAM ELBORNE, F.C.S., F.L.S.,

Lecturer on Materia Medica in the Owens College, Manchester (Victoria University).
December 15, 1888.

ROBINSON'S ORANGE WINE.

Specially prepared for Quinine Wine, does not deposit, will keep good in any climate, and well adapted for Export Trade. Supplied in Cash containing 9, 18, 30, 60, or 120 Gallons. Terms on application. [2]

PHARMACEUTICAL SHERRY WINE.

This Wine is well adapted for Pharmaceutical Preparations, and is the strength ordered by the B.P. Price, in 6-Gallon Casks, 5/6 per gallon; in 2-Gallon Jars, 6/- per gallon, carriage paid. Casks charged 7/6, Jars 2/6, and allowed if returned. Cash or satisfactory reference to accompany order.

B. ROBINSON, Distiller and Brewer of British Wines, Church St., Pendleton, Manchester.

THE KAISER'S COCOA.

MEAT. PEPTONE. COCOA.

This Preparation of Cocoa and Peptonised Meat Extract forms one of the most powerful concentrated foods known; it is indispensable to invalids, a boon to the healthy, and to those of a weak digestion. From its richness in nitrogenous principles (21 per cent.), it contains all the elements of tissue muscle, and blood formation, in a form ready to be assimilated at once, being predigested. In Powder for Breakfast, &c., or in Tablets.

As taken by the late EMPEROR FREDERICK on the recommendation of Dr. Leyden.

PERFECT FLAVOUR. NO OBJECTIONABLE TASTE. EASILY DIGESTED.

Price 1s. 6d. per Tin. "The article is in every way of satisfactory quality."—*British Medical Journal*. Price 1s. 6d. per Tin.

Sole Agents—SCHEIBLER BROS. & CO., 23 New Broad St., E.C.

VINEGAR MAKING.

Our Process makes really "PURE Malt Vinegar" under 6d. per gallon, and requires no licence.

The great success of our Malt Acid has stirred up the Vinegar Brewers into an attempt to crush it, which, however, has utterly failed.

NEWHAM & PICKARD,

SHUDE LANE, SHEFFIELD.

TOWER TEA

A MOST VALUABLE AGENCY.

REGISTERED.

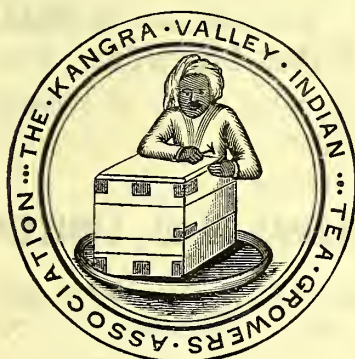


Tower Tea

NOTE.  These Trade Marks appear on every Package.

WHERE VACANCIES EXIST, AGENTS ARE APPOINTED BY

**THE GREAT TOWER STREET TEA COMPANY, LIMITED,
5 JEWRY STREET, LONDON, E.C.**



TRADE MARK.

KANGRA VALLEY INDIAN TEA GROWERS' ASSOCIATION.

French & Langdale, 14 St. Dunstan's Hill, London, E.C.

Guaranteed to be Absolutely Pure, as supplied to Europeans in India.

Packed in 1-lb., ½-lb., and ¼-lb. Metallic Air-tight Packets.

No. 1, Orange Pekoe, at 4/ per lb. No. 2, Pekoe, at 3/ per lb. No. 3, Pekoe
Souchong, at 2/6 per lb. No. 4, Souchong, at 2/ per lb.

Export Prices in Bond, 6d. per lb. less than above, in Chests of 50 lbs. and upwards, shipped free of
charge. 50 lbs. Carriage Paid. No Travellers employed. Wholesale Terms and Tasting
Samples on application.

These Teas are recommended to Chemists not only on account of their
Purity, but because they are Less Astringent than other Indian Teas.

EVERY CHEMIST & DRUGGIST

*Should write for samples and terms (post free) of the
Delicious Spring Blossom Ceylon Tea. This valuable and
profitable agency is worth securing. Handsomely and
specially packed for Chemists' sale in air-tight canisters.*

In ¼-lb., ½-lb., and 1-lb. Canisters, to sell Retail at 2/, 2/6, and 3/ per lb. Set of three ¼-lb. samples post free for 2/ in stamps.

CAVE, JOHNSON & CO., WHOLESALE TEA AND COFFEE DEALERS, 8 LIME ST., LONDON, E.C.

EIGHT PRIZE MEDALS AWARDED

GOODALL'S HOUSEHOLD SPECIALITIES.

YORKSHIRE RELISH.

Most Delicious Sauce in the World. Bottles, 6d., 1s., and 2s. each

GOODALL'S BAKING POWDER.

The Best in the World. 1d. Packets; 6d., 1s., 2s. and 5s. Tins.

GOODALL'S EGG POWDER.

One 6d. Tin is equal to 25 eggs. In 1d. Packets; 6d., 1s. and 5s. Tins.

GOODALL'S CUSTARD POWDER.

Delicious Custards without Eggs. In Boxes, 2d., 6d., and 1s. each

GOODALL'S BLANCMANGE POWDER

Delicious Blancmange in a Few Minutes. Boxes, 6d. and 1s. each.

GOODALL'S QUININE WINE, B.P.

Best Tonic yet Introduced. Bottles, 6d., 1s. and 2s. each.

GOODALL'S GINGER-BEER POWDER.

Makes the Best Ginger-Beer. Packets, 3d. and 6d.

GOODALL'S BRUNSWICK BLACK.

For Painting Stoves, Grates, Iron, Tin, &c. 6d. and 1s. Bottles

GOODALL'S LAVENDER WATER.

A Rich and Lasting Perfume. Bottles, 1s., 2s., and 5s. each

GOODALL'S PLATE POWDER.

For Polishing and Cleaning all Metals. Boxes, 6d., 1s. and

GOODALL'S JELLY SQUARES.

Make a Delicious and Nutritious Jelly. In ½- and 1-pint boxes, 3d. and 6d. each.

PROPRIETORS—GOODALL, BACKHOUSE & CO., LEEDS.

PATENT MEDICINES

AND

DRUGGISTS' SUNDRIES.

Monthly Price List of Patent Medicines, Druggists' Sundries, &c., will be sent post free on application to

GOODALL, BACKHOUSE & CO., LEEDS.

30

TO THE CHEMISTS & DRUGGISTS OF GREAT BRITAIN.

TELEGRAPHIC ADDRESS:

COLEMAN,

GEORGE'S, NORWICH.

St. George's, Middle St.

NORWICH,

December, 1887.

The Excise Authorities having created a difficulty as to the sale of Medicated Wine containing a certain percentage of alcohol, we obtained in January last, from the Inland Revenue Authorities, permission to sell our Liebig's Extract of Meat and Malt Wine, **WITH QUININE**, without a Wine Licence, and many Chemists not holding a Wine Licence have sold considerable quantities. In order further to meet the requirements of the trade, we have introduced a Liebig's Extract of Meat and Malt Wine, **NON-Alcoholic**, made from the juice of the Grape, Liebig's Extract of Meat, and Extract of Malt. This also can be **SOLD WITHOUT A WINE LICENCE**. Your orders will oblige either direct or through the Wholesale Houses.

Yours obediently,

COLEMAN & CO., LIMITED.

*N.B.—The Wine is sold in Bottles, 2/9 and 4/6 each.
Trade prices on application.*

P.S.—Where the Magistrate's Certificate is not held we are willing to pay the **entire cost of a Retail Certificate** (the holder of which can sell any kind of Wines) if an **assorted order of 6 dozen** is sent us of any of our preparations. List on application. Our Liebig's Extract of Meat and Malt Wine **WITHOUT QUININE** commands a very large sale, and is recommended by over one thousand medical men who have sent us testimonials in its favour.

SOLE MANUFACTURERS—

COLEMAN & CO., LIMITED,

ST. GEORGE'S, NORWICH,

AND 3 NEW LONDON STREET, LONDON, E.C.

A WONDERFUL SUCCESS!!**NON-INTOXICATING BEER**

Made from MASON'S Original

EXTRACT of HERBS

(REGISTERED.)

Composed of Yarrow, Dandelion, Comfrey, & Horehound.
ENLARGEMENT OF SIZE.

A Sixpenny Bottle makes EIGHT GALLONS of
HERB OR BOTANIC BEER

A NON-INTOXICATING BEVERAGE

Full of Body and Flavour, with a Creamy Head like Bottled Ale, the most perfect substitute for Alcoholic Drinks ever discovered, for either Summer or Winter.

BEWARE of mean and fraudulent imitations.**BEWARE** of others copying our title.

MASON'S is the original and only genuine.

MASON'S is a Special Compound entirely from Herbs.

NO OTHER EXTRACT MAKES BEER LIKE IT.

Sold in Bottles at 6d., 1/, & 2/ each, with directions.

MASON'S WINE ESSENCES

Make Temperance Wines in a few minutes.

Ginger, Orange, Lemon, Raspberry, Black Currant, &c.

These are having a very large sale now, and are extensively advertised.

Sold in Bottles at 6d., 1s., and 2s. each.

Quotations on application.

SOLE INVENTORS & MANUFACTURERS:

NEWBALL & MASON,

Manufacturing Chemists and Botanic Druggists. NOTTINGHAM.

TYRER'S SAUCES

8000 VALUE

"BOROUGH" KETCHUP

THE GIANT 1d. BOTTLE OF SAUCE.
 LARGEST IN THE TRADE.

In Half-Gross Boxes, at 6/8 per Gross.*

"BOROUGH" KETCHUP, WORCESTER, HARVEY, YORKSHIRE, OR READING SAUCE.

1d. Sample Bottles, dozen parcels	--	--	per gross	5/	extra quality	8/
1d. Giant Bottles, dozen parcels	--	--	"	6/8	"	8/
1d. Giant Bottles, dozen parcels	--	--	"	8/	"	8/
1d. Bottles (flat or round), reputed 1-pint	--	--	"	6/8*	"	8/
1d. Bottles (flat or round), reputed pint	--	--	"	18/	"	24/
1-pint Imperial Round Stoppered Bottles	--	--	"	28/	"	32/
1-pint Imperial	--	--	"	30/	"	36/
12 1/2-gallon Casks (casks free) ..	--	--	each	50/	"	60/
				20/	"	32/

ROYAL CAFÉ SAUCE.

In 8-oz. square-stoppered bottles, 48/ per gross.

A rich, fruity Sauce of fine flavour, and worth especial attention, as being the most saleable in the market.

Samples of any kind Sent Free of all Cost by

PETER TYRER,

The "Borough" Ketchup and Sauce Maker,

70 LONG LANE, BOROUGH, LONDON, S.E.

SCOTCH AGENCY

WEST NILE STREET, GLASGOW.

Also Sold by W. & C. PANTIN, Upper Thames Street, LONDON, E.C.

BURGOYNE & CO., 16 Coleman Street, London, E.C.

JOS. TRAVERS & SONS, 119 Cannon Street, London, E.C.

SOLD EVERYWHERE.

Makes the best
GRAVIES, SOUPS, & SAUCES.

IMPROVES
STEWES and HASHES.

ASK YOUR GROCER FOR
GRAVINA
 EDWARDS' GRAVY POWDER.
 TRADE MARK.

REGISTERED

PUT UP IN

Self-opening Canisters

1-lb., 1/10; 1/2-lb., 1/-; 1/4-lb., 6d.

Sample Free on receipt of Business Card.

NOURISHING.**ECONOMICAL.**

SOLE MANUFACTURERS—

F. KING & CO., LTD.

3 to 6 Camomile Street, LONDON;

26 WARING STREET, BELFAST.

MILLAR'S BRITISH WINES.

ORANGE (suitable for Quinine), GINGER, RAISIN, COWSLIP, CHERRY, &c.

A. MILLAR & CO., Thomas Street, DUBLIN.

Sole Agents for London and District—H. J. ROYDANT & CO., 75 Acre Lane, Brixton, S.W.

"RAMORNIE."**LIEBIG'S****Extract of Meat.**

As supplied to the War and India Offices.

1-lb. Jars.....per lb.	6/2	per doz.	74/0	2-oz. Jars.....per lb.	7/0	per doz.	10/0
1/2-lb. Jars....."	6/4	"	88/0	1-oz. Jars....."	7/8	"	5/9
4-oz. Jars....."	6/7	"	19/9	1/2-oz. Jars....."	8/0	"	3/6

QUOTATIONS FOR EXTRACT IN "BULK" ON APPLICATION

Write for Detailed Prices List to the Australian Meat Co., 9 and 11 Fenchurch Avenue, E.C.

6 lbs. Carriage Free.

W. B. FORDHAM & SONS, LIMITED, LONDON, N.

SOLE CONSIGNEES OF

BROOKE'S SOAP (Monkey Brand)

In Cases of 100 Large Bars, 25/ net, cases free
 In Cases of 60 " 15/ ;
 In Boxes of 48 Small " 6/3², boxes free



It makes
 BRASSWARE LIKE MIRRORS
 GLASSWARE LIKE CRYSTAL
 ZINC LIKE NICKEL
 TIN LIKE SILVER
 COPPER LIKE GOLD
 MARBLE LIKE IVORY

Removes Rust
 from Steel and Iron.
 Makes Paint
 look like New.

Lancet says:—"It
 answers admirably."

British Medical
 Journal says:—"It is
 well adapted for remov-
 ing stains, rust, and dirt."

For Marble
 For Stair Rods
 For Bell Handles
 For Windows
 For Fire-arms
 For Bicycles
 For Bronzes
 For Pots and Pans
 For Everything

Sells at a good Price
 without trouble.

WON'T WASH
 CLOTHES.

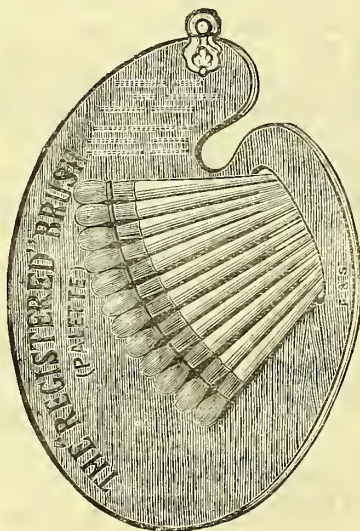
Endorsed by 100 Lead-
 ing Newspapers.

All London Drug Houses will supply free London or Brist. J.



ENAMEL BRUSHES.

One dozen on Showcard for 3/9.



3/9, 5/6, 9/12, and 18/ per dozen.

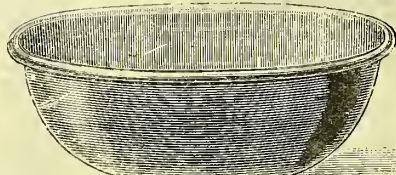


Silico-Enamel.

No Rust, no Tarnish,
 on Bright, Polished, or
 Plated Metals, by using
 the Improved Patent
 Silico Enamel.

In ONE SHILLING Bottles,
 8/ per doz.
 Also in Pints, Quarts, and
 1 Gallons.

OVAL "UNBREAKABLE" TUBS.



Light, strong, durable. No hoops to drop or rust off
 Measurement 16 inches. Enamelled white inside,
 marbled outside. No House complete without them.
 Retail, 2/6 each. 21/ per doz. New List of 30 Articles
 in this saleable ware now ready. Post free.

GLUE

Upwards of 100 tons of Glues and Gelatines always in
 Stock. Samples Free at any price named by Buyers.

WAX TAPERS.



In Fancy Counter Boxes, 1 lb.
 12 in., thin. 18 in., Med. 22 in. Thick.
 10d. lb. 10d. lb. 10d. lb.
 The 22 in. 1 lb. paper parcel, 9d. lb.

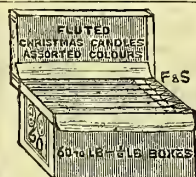
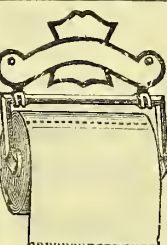
TOILET PAPER.

We are Head-quarters for
 this Special.
 Prices upon application.

BROWN PAPER,
 Best value ever offered.
 12/6 and 16/ cwt.

CHRISTMAS CANDLES.

Super quality, fluted,
 assorted colours, 60 to lb.,
 in 1/2 lb. fancy boxes.
 Per dozen lbs. 6s. 6d.
 Special for quantity.



SALES
 INCREASING.



Large 8/6, Small 3/6 per doz. net.

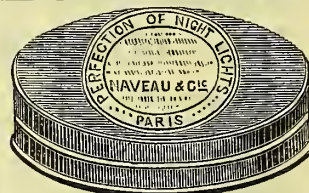
HERBERT'S GLUE POT.

We manufacture these,
 and all dealers will
 supply the genuine Her-
 bert at

Retail 6d., 3/6 per doz.

" 1/ 7/ "

(Full instructions on label
 around the pot.)



BEST FRENCH FLOATS.

6d. and 1s. Boxes, 2s. 6d. and 5s.

W. B. FORDHAM & SONS, LIMITED, LONDON, N.

Telephone Number, 1852.

Telegraphic Address—CHEMICUS LONDON.

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Andrews, R. W.....	Denaeyer's Peptone Co.....	Kay Bros. (Lim.).....	Pontifex & Wood (Lim.).....
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Atkinson & Barker.....	Dukes, B.....	Kuhn, B.....	Redmond's Stomach Wash.....
Attwood, A., & Co.....	Duncan, Flockhart & Co.....	Leth & Ross.....	Reeb, H.....
Australian Meat Co.....	Dunn, W. G., & Co.....	Lipscombe & Co.....	Richards, J. M.....
Ayrton & Saunders.....	Durrant, G., & Co.....	Liverpool Lint Co.....	Robbins, J., & Co.....
Baelz, R., & Co.....	Edwards & Co.....	Liverpool School of Pharmacy.....	Roberts & Co.....
Bailey, M., & Co.....	Elliman, Sons & Co.....	Lofoden Od Liver Co.....	Robertson, J., & Co.....
Bailey, W. H., & Son.....	Evans, Sons & Co.....	Lothhouse & Saltmer.....	Robinson, B.....
Barclay & Sons (Lim.).....	Evans, Lescher & Webb	London Homoeopathic Hospital	Rosmarie Manufacturing Co.....
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Becker, F. E., & Co.....	Ewen & Sons.....	Longmer & Co.....	Sanitas Company (Lim) Text 594
Beckett, W.....	Exchange Column.....	Lüneberger Wax Bleaching	Santha Tea Co.....
Beecham, T.....	Farina, J. M.....	Works.....	Schiebler & Co.....
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Betts & Co.....	phites.....	Macfarlan, J. F., & Co.....	Self-opening Tin Box Co.....
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Bever Frères.....	Ferguson, W. K.....	Manchester College of Pharmacy.....	Sequal (Lim.).....
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Blondeau & Cie.....	Fletcher Bros. & Co.....	Martindale, W.....	Shirley, A. W.....
Blyton, T. Bage & Co.....	Fletcher, Fletcher & Stevenson	Maw, S., Son & Thompson.....	Silicated Carbon Filter Co.....
Botwright & Grey.....	Text 594.....	Mawson, Swan & Weddell.....	Silverlock, H.....
Bradley & Bourdas.....	Fordham, W. B., & Sons.....	May & Baker.....	Smith, Stephen, & Co.....
Bragg, J. L.....	Fougera, E., & Co.....	May, Roberts & Co.....	Smith, T. & H., & Co.....
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Burroughs, Wellcome & Co.....	Goodall, Backhouse & Co.....	Moller, P.....	Taddy & Co.....
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Curtis & Co.....	Hunt, W. F., & Co.....	Owen, J., Jr.....	College).....
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Da Silva & Co.....	Jewsbury & Brown.....	Pears' Soap.....	Text 594
Davis, J.....	Johns, W.....	Perken, Son & Rayment.....	Wyleys & Co.....
Davis, J., & Co. (Lim.).....	Johnson & Co.....	Petersen, M., & Co.....	Youldon, E.....
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Apollinaris
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Chemists' Aerated Waters
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Ellis (Ruthin)
Hassall and Co. (Citric Acid
Phospho)
Hay, W.
Idris and Co.
Jewsbury and Brown
Mills and Co. (Bourne)
St. Louis Natural Mineral
Water
Taylor, T. and F. J.
[See GINGER ALE.]

BITTO PLANT

[See STAPHYLOS AND ESSENCES.]
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Pevre, T.
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Toogood
Youldon, E.

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Squire and Sons

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Fuerst Bros.

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Maw, Son and Thompson
May, Roberts and Co.
Sanger and Son
Schutze, F., and Co.
Thompson, Walters, Hole and
Co. (Limited)

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Mumford, R.

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Howards and Son (Pharm.)
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May and Baker
Morris and Callard
Moss and Co.
Pronk, Davis and Co.
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Lynch and Co.
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Sanger and Sons
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CELRIDINE

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CELRIDINE, &c.

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Rowntree and Co.
Seheiber Bros. and Co.
Van Houten's Cocoa

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Brekke and Howland
Burroughs, Wellcome and Co.
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Hill, A. S., and Son
London Cod Liver Oil Co.
Möller, P.

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Lothhouse and Saltmer
Oppenheimer Bros. and Co.
Smith, T. J.
Woolley, Sons and Co.
Wright, Layman and Umney

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Symington and Co. (Coffee Essence)

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Brooks, Peel and Co.
Sanders, H. G., and Son

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Fuerst Bros.
Hooper, B., and Co.
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Newberry and Sons
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Sanger and Sons
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Tookood, W.
Wood, Vincent

DRUMS, CANS, &c.

Noakes and Co.

DYES

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EAU DE COLOGNE

Farina, J. M.
Shirley, A. W.

ELECTRIC APPAR.

Berry, F. H.
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Gent and Co.
Orme and Co.

EMBROCATION

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Elliman, Sons and Co.

ENAMEL

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ENEMAS

Bailey, W. H., and Son
Ingram and Son
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Maw, Son and Thompson, S.
Sanger and Son
Schutze, F., and Co.

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Bush, W., Son and Co.
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Cummock, J.
Duckworth and Co.
Evans, Sons and Co.
May and Baker
Stevenson and Howell
Symes and Co.
Treat, R. C.
Warwick Brothers
Wright, Layman and Umney
Vogt, G.

ESSENCES

Beckett, W.
Boehm, F.
Brady and Hinchliffe
Burgoyne, Burdidge and Co.
Bush, W. J., and Co.
Cummock, J.
Duckworth and Co.
Goodall, Backhouse and Co.
Hay, W.
Idris and Co.
May and Baker
Oldfield, Pattinson and Co.
Southwell, C., and Co.
Stevenson and Howell
Tyner, P. (Anchovies)
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Howards and Son
May and Baker
Robbins
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Hooper, B., and Co.
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Liebig Co.

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Evans, Sons and Co.
Hearn, E. A., and Co.
Hockin, Wilson and Co.
Kilner Bros.
Maw, Son and Thompson, S.
Marriot, E., and Co.
May, Roberts and Co.
Thompson, Walters, Hole and Co. (Limited)
Toogood, W.

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Bovril (Limited)
Brand and Co.
Bragg, J. L. (Charcol Biscuits)
Dahl's Dyspepsia Cakes
Goodall, Backhouse and Co.
Heaton, Squire (Malted)
King, F., and Co., Lim.
Liebig Co.
Marshall, J.
Mottershead & Co. (Benger's Food)

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Kerfoot, T.
Wright, Layman and Umney

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Hynd, Nash and Co.
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Newball and Mason (Extract of Herbs)
Potter and Clarke (Extract of Herbs)
Wilkinson, A., and Sons (Compressed Hops)

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Butcher, W., and Co.
Epps, J., and Son
Gould, E., and Son
Keene and Ashwell
Leath and Ross
Thompson and Capner
Watson and Wates

HOPS

Wilkinson, A., and Sons

HOP ALE ESSENCE

Hay, W.

HYPHOSPHITES

Duncan, Flockhart and Co.
Dunn and Co.
Fletcher, Fletcher and Co.
Symes and Co.
Typhke and Kinz

HOSPITALS

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London Homoeopathic

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Hockin, Wilson and Co.
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Toogood, W.

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Sanford
Steiner and Co.
Vogt, G.

INK [See MARKING]

Bewley and Draper
Duncan, Flockhart and Co.

JELLIES (TABLE)

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KETCHUP

Tyner, P.

LAMPS

The Wenham Co. (Limited)

LARD

Ewen J.

LEECHES

Fitch and Nottingham
Potter and Clarke

LIME JUICE

Evans, Sons and Co.
Idris and Co.
Hockin, Wilson and Co.
Southwell, C., and Co.

LINT

Liverpool Lint Co.
Maw, Son and Thompson, S.
Newsome, C.
Robinson and Sons
Seabury and Johnson

LOZENGES

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Blyton, T. Bage, and Co.
Gibson, E., and Sons (Mantra)
Hill and Son
Kerfoot, T.
Martindale, W.
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Raines and Co.
Randall and Co.
Warwick Bros.

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Dinnelord
Henry, T. and W. (Calined)
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Kerfoot, T. (Citrate)
Murray, Sir James, and Son

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(Kepler's)
Heaton, Squire and Francis
Hockin, Wilson and Co.
Oppenheimer Bros. and Co.

MARKING INKS

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Hickson, J.

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MENTHOL

A. I. Menthol Depot, A. W.
Shirley, Proprietor
Cooking and Co.
Hockin, Wilson and Co.
Maw, Son and Thompson, S.
Shirley, A. W.

MERCURIALS

Howards and Son
May and Baker

METHYLATED

SPIRITS

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Harvey, J. W., and Co.
Jones and Co.
Phillips, G., and Co.

METHYLENE

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MICROSCOPES

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MILK

Nestle, H. (Condensed)
Swiss Milk Co.

MIXING

Bracher and Co.
Carter, J. H.
Werner and Pfleiderer

MORPHEA

Macfarlan, J. F., and Co.
Smith, T. and H.

MUSTARD

Johnson, J. H. and S. (Ess. Oil)

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Anglo-American Oil Co. (Lim.)
Colthurst and Harding
Fox, W., and Sons
Pronk, Davis and Co.

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Perken, Son and Rayment
Raphael, J., and Co.

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Albert and Co.
Burroughs, Wellcome and Co.
Cheesebrough (Vaseline)
Green, S. (Singapore Eye)
Grindley (Petroleum Jelly)

OPHTHALMIC

Pomies, Dr.

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Fletcher, Fletcher & Stevenson
Newberry (Infusum)
Warner and Co. (Inglavin)
Zimmermann

PAPAIN FINKLER

Kuhn, B.

PARALDEHYDE

Zimmermann, A. and M.

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Beezler, J., and Co.
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Dahl's Dyspepsia Cakes
Da Silva and Co.
Edwards and Son
Evans, Lescher and Webb
Fennings (Powders)
Goodall, Backhouse and Co.
Holloway (Pills and Oint.)
John's Liver Pills
Kemp, W. H.
Koplica Cure
Lator (Phosphodyne, &c.)
Lincoln (Clarke's Mix.)
Mason, W. B.
May, Roberts and Co.
Mearnsine Manufacturing Co.
Newberry and Sons.
Oil of Olive Co.
Powell, A. E. and Co. (Moon-seed Bitters)
Redmond's Stomach Wash
Richards, J. M.
Roberts and Co. (Foreign)
Seahall (Limited)
Stedman, J. (Teething Powders)
Swift's Specific
Wilson, A. W. (Bunter's Nervine)

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No. 142. Gran. Cath. Comp. (Little Cathartic Granules).

Aloin, 1-10 gr.; Podophyllin, 1-5 gr.; Ext. Hyoscy., 1-20 gr.; Jalapin, 1-10 gr.; Ext. Nuc. Vom., 1-20 gr.; Ol. Res. Capsici, 1-20 gr.
Dose 1 to 4.Per 1,000,
in Plain Bottle,
4/-.Per Small Stoppered
Vase, with painted
glass label,
5/6.Per Stoppered Vase,
with painted glass
label, (5,000.)
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"No. 120" ("Pil. Cathartic and Liver").

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R Podophyllin, 1 gr.; Ext. Coloeynth, 1 gr.;
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Pv. Saponis, 1-8 gr.; Ext. Hyoscyami, 1-8 gr.;
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in Plain Bottle,
4/-.Per Stoppered Vase,
with painted glass
label,
6/4.Per Bottle (Bulk)
of 5,000,
18/9.

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1 &

KERFOOT'S PEARL CACHOUS.

THESE beautiful little lozenges, perfectly spherical in form, weighing about 400 to the ounce, of exquisite flavour and great strength, are the most popular and perfect breath lozenges ever introduced; unlike the ordinary flat lozenges, these little PEARLS have no angles to attract dust and become soiled with a slight handling, consequently they can be carried in the purse or pocket, and are altogether more portable than ordinary lozenges.

The unique appearance and flavour of this novelty quickly ensured a large sale, and its success, as might have been anticipated, quickly brought to the front some worthless imitations, the sale of which can only result in disappointment to all concerned.

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are the only genuine PEARL CACHOUS: they are not only better looking, but are double the strength of the imitations, and buyers are therefore requested to order the original, and thus ensure a perfect article. They are elegantly put up in attractive one-pound bottles, and are an ornament to any Pharmacy. The following flavours are always in stock—

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Agent, Mr. HENRY C. QUELCH.
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READY in being prepared with Remedies to battle Winter Ailments, and WISE in purchasing

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"GLYCERINE CREAM"—Perfection of Toilet Requisites, quickly cures Chapped Hands, Frost Bites, Roughness, Cracks, Tender Feet, and prevents Chilblains; most elegant, not sticky, deliciously perfumed.

"CORN CURE"—Salicylic and Iodine, does not readily dry up; this will answer when all other so-called cures fail; test, send for sample.

"BRONCHELIXIR"—Speciality for Bronchitis, Influenza, Difficult Breathing, Cold in the Head, &c.; gives instant ease, keeps indefinitely.

"RED ROSE LOTION" (from recipe of Erasmus Wilson), most excellent Skin Depurative, removes Spots, Pimples, Blackheads, &c.; Stops Irritation, is cooling and sweetly perfumed.

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Recipes, 7d. each; Six for 2s. 8d., with full instructions for making, use, dose, &c., post free.

Send for particulars of SPECIALS, stepping stones to a fortune; also "Lovely Little Landscapes," India Rubber Goods, splendid little Turkey Cups, 1s. doz. free, and other sponges.

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Importers of and Agents for the Principal
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AGENCIES AND CORRESPONDENCE SOLICITED.

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NOTE REDUCED PRICES OF QUININE PILLS.

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OF THE BRITISH PHARMACOPŒIA AND OTHER STANDARD AUTHORITIES.

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	25 PILLS.	100 PILLS.		25 PILLS.	100 PILLS.
Aloin	5/	16/	Quinine, Bisulphate	5/	16/
"	6/	20/	"	5/	16/
"	7/	24/	"	5/6	18/
"	11/	40/	"	7/6	26/
Compound	7/	24/	"	9/6	34/
and Strychnine	7/	24/	"	11/6	42/
Strychnine and Belladonna	7/	24/	" Sulphate	5/	16/
or Aperient, No. 1 (Clark)	9/	32/	"	5/	16/
" No. 2, No. 3, No. 4	7/	24/	"	6/	20/
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2/9..Ditto ditto	21/8	4/6.. " Raquin	36/	11/..Laville's Gout Tincture	91/10
2/9..Aubergier's Syrup	26/3	4/6.. " Mathey Caylus	27/	11/.. " Pills	91/10
2/9.. " Pâte	15/4	4/6..Chassaing's Wine	38/9	2/3..Papier Fayard	13/6
6/6..Bay Rum	57/	2/9.. " Pills	24/4	1/11..Ditto	7/3
5/6..Ditto	31/	4/6..Olin's Bromide Cam. Dragées	45/	4/..Papier Frumau	24/4
2/..Belloc's Charcoal	15/4	5/..Eau Botot (Genuine)	40/1	2/3..Ditto	14/5
1/9.. " Lozenges	14/5	3/..Ditto	24/4	1/9..Pâte Aubergier	15/4
4/6..Blancard's Pills	32/5	2/6..Especie's Cigarettes	13/6	1/9.. " de Berthé	15/4
2/6..Ditto	18/	6/..Elixir de Coca	56/9	2/9.. " de Coca	24/4
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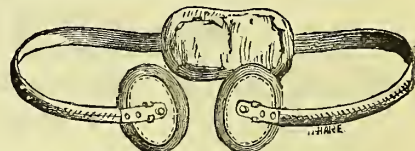
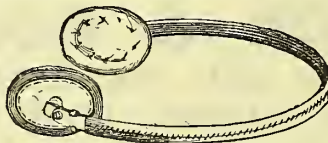
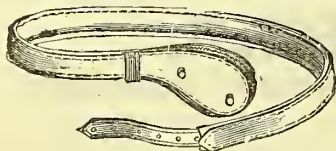
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TOW.

COCKING'S ADAPTABLE PORO-PLASTIC JACKETS AND SPLINTS.

Patentee and Sole J. T. COCKING, PLYMOUTH.
Manufacturer,

Cervical Jacket, No. 1. Cervical Jacket, No. 3.

INSTRUCTIONS
FOR MEASUREMENT.

JACKET
(in cases of slight deformity)

Circumference at axilla.
" waist.

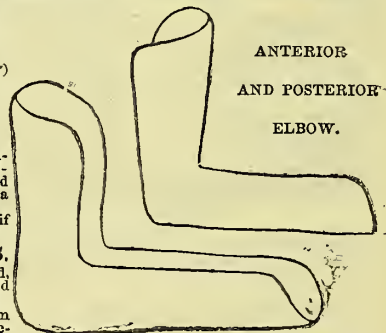
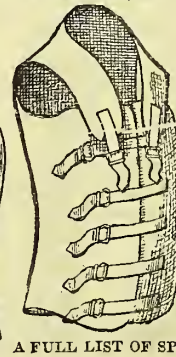
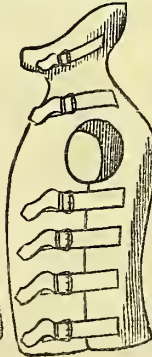
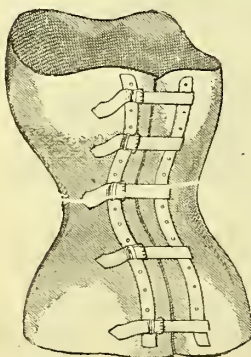
Length from axilla to great
trochanter.

In severe angular cases circumference over apex of curve, position of ditto, and contour should be given; in lateral cases a description of the case.
In all cases it must be stated if for male or female.

CERVICAL JACKETS.

Same measurements required, and circumference at neck, and length from neck to axilla.

Any part of the Jacket can in the process of manufacture be left soft.



A FULL LIST OF SPLINTS AND PORO-PLASTIC IN SHEETS MAY BE HAD ON APPLICATION.

SYR. HYPOPHOS. CO., FELLOWS.

CONTAINS THE ESSENTIAL ELEMENTS to the Animal Organisation—Potash and Lime;

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THE TONICS—Quinine and Strychnine;

AND THE VITALISING CONSTITUENTS—Phosphorus, combined in the form of Syrup with SLIGHT ALKALINE REACTION.

IT DIFFERS IN EFFECT FROM ALL OTHERS, being highly susceptible to oxidation during respiration, pleasant to taste, acceptable to the stomach, and harmless under prolonged use.

IT HAS SUSTAINED A HIGH REPUTATION, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs. Is employed also in various nervous and debilitating diseases with success.

ITS CURATIVE PROPERTIES are largely attributable to Stimulant, Tonic, and Nutritive Qualities, whereby the various organs are recruited.

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The prescribed dose produces a feeling of buoyancy, and removes depression and melancholy; hence it is of great value in the treatment of mental and nervous affections. From its exerting a double tonic effect, and influencing a healthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE.—CAUTION.—The success of Fellows' Hypophosphites has prompted certain persons to utter substitutes Mr. Fellows, having examined several of these, finds no two samples identical, and all differ from the veritable, in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, in the property of retaining the strychnine in solution, and in the medicinal effects.

SPECIAL NOTICE.

Lest any Members of the Medical Profession may be misled by the many specious advertisements of imitators of Fellows' Syrup of Hypophosphites, Mr. Fellows begs to publish the following, viz.—

That he is the sole inventor of the formula of Fellows' Compound Syrup of Hypophosphites, which was discovered and prepared for the first time for his own use in 1865, when out of health;

That the testimonials bear date from the year 1868;

That the genuineness of the early testimonials was certified by Aaron Alward, Esq., M.D., Mayor of the City of St. John, Province of New Brunswick, Canada, and the great seal attached on 6th February, 1868; and

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Compound Sulphur Lozenges.
Gastric Antacid Lozenges.
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Pharmacopœia Lozenges.

Chlorodyne Lozenges.
Twemlow's Chlorodyne.
Compressed Pellets.
Fruit Salines.

Soluble Essence of Lemon.
Composition Tablets,
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Medicated Candies.

T. Bage Blyton & Co.

BRONCHIAL LOZENGES

The painful precision with which Chest and Throat Complaints follow upon the heels of the fogs and east winds is unfortunately too widely felt.

To those who are afflicted by these distressing complaints anything in the shape of cure or relief is gladly welcome, and there are many Pharmacists who have earned the gratitude of their Asthmatical Clients by bringing before their notice a simple and really effective Lozenge.

For specific troubles of the Throat and Bronchial Tubes, Lozenges have decided advantages over liquid medicines.

In the first place, their action is local; secondly, they act immediately upon the affected parts; and, thirdly, their action is slow, but *continuous* and *prolonged*, and therein lies the secret of their success.

In order to get the full benefit of a Lozenge it is necessary that it should be well made, its ingredients of the highest order of purity, and the doses of the active principles balanced with discriminating nicety.

We claim for our Bronchial Lozenges these qualifications, and the rapidly-increasing demand is proof simple and positive of their popularity and efficacy.

In anticipation of the Winter season we have pleasure in calling the attention of the Pharmaceutical world to these Lozenges, knowing that they will prove a credit to the Pharmacist and a boon to his customer.

We shall be pleased to submit samples on application.

Price 2s. 6d. per lb. Special Quotations to Wholesale Buyers.

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Improved Appliances.

LONDON.]

OCTOBER 26TH.

[1889.

Improved Instruments

For the Self-application of topical remedies to the Anus and Rectum, as recommended by Dr. WARD COUSINS, Senior Surgeon to the Royal Portsmouth Hospital, and to the Portsmouth and South Hants Eye and Ear Infirmary. (Vide Report—BRITISH MEDICAL JOURNAL.)

Fig. 1. Rectal Injector.—The Anal Tube is made of vulcanite or elastic gum, and the syringe is capable of holding either 3 drs. or 6 drs. of fluid.

Fig. 2. New Ointment Introducer.—The Instrument is charged by unscrewing the neck and filling the barrel. The Ointment is projected through the tube by pressing upon the piston-plate with the finger.

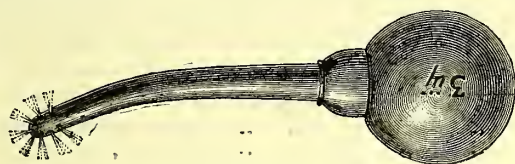


FIG. I.

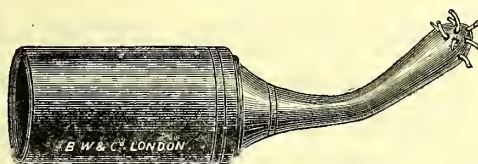


FIG. II.

Price to the trade, 3 dr. size and 1 oz. size, 36s. per dozen.
Retail, 4s. 6d. each.

A Circular with Formulae, &c., will be sent post free to any Chemist on request.

PINOL-EUCALYPTIA DRY INHALER.

A NEW ANTISEPTIC POCKET INHALER.

On account of the injurious effects of moist inhalations in many cases of chronic disease of the pulmonary organs, and as medicaments administered with a hand spray seldom penetrate further than the larynx at most, we have arranged the simplest device it is possible to imagine, which fulfils every needful requirement, and is within the reach of the poorest. It is known as the Pinol-Eucalyptia Dry Inhaler, and is designed for impregnating the air inhaled with any volatile substances desired. It supersedes all other apparatus for "dry Inhalations" and appears to be perfect.



The Pinol-Eucalyptia Dry Inhaler is light, sub-

stantial, presentable, and easily cleaned—a great point. It is thoroughly efficient in every way, and perfectly adapted for the very weakest of lungs, rendering the air antiseptic, bracing, and healing.

Dr. Sinclair Coghill, of the Chest Hospital, Ventnor, said in an address, that out of all the multitude of Inhalers that had been submitted to his notice not one of them seemed to him a perfect instrument. Such has been the experience of medical men generally, but we believe all that will now change for the better. From the milder catarrhal troubles to cases of pulmonary gangrene this new Inhaler gives promise of great and very wide usefulness.

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VEREKER'S CHLORIDE OF AMMONIUM INHALER.

"The neutral vapour of Chloride of Ammonium removes unhealthy and offensive secretions, and restores the long diseased or weakened nasal and respiratory mucous membrane to a healthy state, so that in cases of catarrh, where thickening, induration, and irritation exist, a most decided improvement is brought about in a short time." In "throat-cough," pharyngeal irritation, and relaxation and weakness of the throat, it acts as a most effective alterative and tonic to the mucous membrane.

Dr. FRANKS, Dublin University, says:—"It is the best I have ever used, and I think I have tried all."

Dr. SMYLY, Ex-Pres. Royal College of Surgeons, Ireland, says:—"It is the best Inhaler for Chloride of Ammonium I have met with."

Supplied to the Trade at 7s. 6d. each. Retail, 10s. each.

GLYCERINE SUPPOSITORIES (B. W. & Co.) IN CHRONIC CONSTIPATION.

The Suppositories are an improved form for the administration of Glycerine in the uncombined state. Defecation will generally result in from two to fifteen minutes after the Suppository has dissolved in the rectum.

The shells of the Suppositories are made of pure cocoa butter and Lanoline (Liebreich), are therefore readily melted by the heat of the body, and will not excite irritation as do injections of glycerine.

Supplied to the Trade at 22s. per doz. boxes containing 1 doz.

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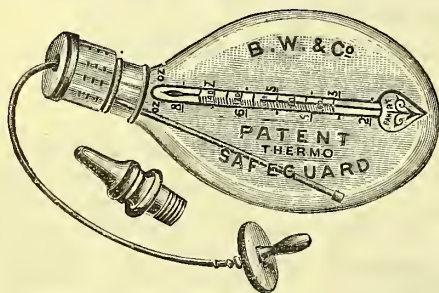
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"PETROLATUM" is not equal to, or intended as a substitute for, our Mark "VASELINE," but is far superior to any other Petroleum Jelly.

Of all Wholesale Houses. In 50-lb. Tins, 2 Tins in a Case, and Casks of about 3 cwt. each.

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The B. W. & Co. PATENT THERMO-SAFEGUARD FEEDING BOTTLE is (apart from the breast) the only rational method of administering infant foods. A thermometer (guaranteed correct) is embedded in the glass, which instantly registers the temperature of the food.

Milk pre-digested with the FAIRCHILD ZYMINE PEPTONISING POWDERS is rendered precisely like mother's milk, and when administered by means of the B. W. & Co. PATENT THERMO-SAFEGUARD FEEDING BOTTLE at a temperature of from 96° to 98° Fahr. (the temperature of breast-milk) it acts as a preventive against bowel complaints, wasting, and other serious symptoms in infants, which are invariably the result of the administration of improperly cooked foods.

The B. W. & Co. PATENT THERMO-SAFEGUARD FEEDING BOTTLE is so simple in its construction that it can be easily kept sweet and clean.

"It has a great deal to recommend it."—*British Medical Journal.*

PRICES—

No. 1	..	..	Retail, 1/-	..	..	9/0 per dozen.
No. 2	..	..	" 1/6	..	..	12/0 "
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Above prices subject to usual discount.

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THE NEW BLACK INK, different from anything else ever produced.

Writing becomes a pleasure when this Ink is used. It has been adopted by the principal Banks, Public Offices, and Railway Companies throughout Ireland.

It writes almost instantly full black.

Does not corrode Steel Pens.

Dries rapidly on the Paper.

Is cleanly to use, and not liable to blot.

Flows easily from the Pen.

Blotting-paper may be applied at the moment of writing.

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See "CHEMIST AND DRUGGIST," December 15th, 1874.

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GOLD MEDAL AWARDED, HEALTH EXHIBITION, LONDON.

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LIQUOR PANCREATICUS (BENGER).

For preparing peptonised or partially digested milk, soups, &c. Bottles, 2/6, 4/6, and 8/6, with full directions.

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Colourless, odourless, and soluble. One will peptonise a pint of milk, &c., in 10 to 15 minutes. Boxes of 12 powders, 2/6.

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An exceedingly active fluid pepsin. Dose, one to two teaspoonfuls with meals. Bottles, 3/, 5/6, and 10/6.

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A delicious quick restorative; will keep in any climate. Tins, 2/ each.

BENGER'S PEPTONISED CHICKEN JELLY.

A nutritive delicacy for Invalids. Tins, 2/ each.

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For Infants, Children, and Invalids. This delicious and highly nutritive food is distinguished from others by the ease with which it can be digested and absorbed. Tins, 1/6, 2/6, 5/, and 10/.

BENGER'S NEW ESSENCE OF RENNET.

For making pure whey, junkets, &c. Bottles, 1/ each.

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MOTTERSHEAD & CO. (S. PAINE & F. B. BENGER), PHARMACEUTICAL CHEMISTS, MANCHESTER



ESTABLISHED 1859.

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Supplied regularly to every member of the following Societies, who have adopted THE CHEMIST AND DRUGGIST as their official organ:—

The Pharmaceutical Society of New South Wales.

The Midland Pharmaceutical Association of New Zealand.

The Pharmaceutical Society of Queensland.

The Pharmaceutical Society of South Australia.

The Hobart Chemists' Association.

The Launceston Pharmaceutical Association.

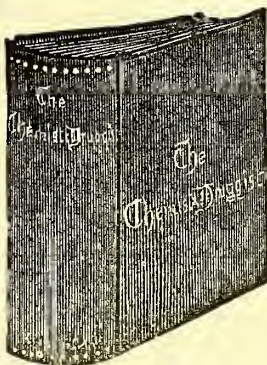
South African Pharmaceutical Association.

For Australasian subscribers the subsidiary journal, THE CHEMIST AND DRUGGIST OF AUSTRALASIA, is included.

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THE reading cases which we offer to subscribers are now used by a very large number of chemists, and are found very convenient. They keep together thirteen numbers in very tidy form, always ready for reference. By having two cases in hand the numbers of a complete volume are always available until the time comes for binding. We sell these cases at the office for 1s., or by parcels post 1s. 3d., or two for 2s. 3d. We cannot forward them to any house for enclosure, nor by any of the carriers, as in the latter case we have to pay for booking.



PRACTICAL MEMORANDA.

FROM the "Digest of Criticisms of the United States Pharmacopœia," Part II.:—

Acetum Scillæ.—Maceration is better than percolation.

Acidum Nitricum.—Frankland recommends the following as the best qualitative test for nitrous compounds:—Add to the suspected solution 1 drop of a saturated aqueous solution of sulphuric acid, then 1 drop of an aqueous solution of phenol, and add ammonia in excess, when the liquid will assume a yellow or reddish-yellow colour. Lindo modifies Frankland's test by replacing phenol with thymol. He states that for quantitative work he prefers phenol, while for qualitative work thymol is better.

Acidum Tartaricum.—It is difficult to detect this acid when associated with boric acid. On adding fluoride of potassium, fluoborate of potassium is formed, and the tartaric acid will now respond to the usual tests.

Adeps Benzoinatus.—Parkinson recommends to heat the benzoin in a flask, and to conduct the vapours into the melted lard.

Amylum Iodatum.—The original formula of Quesneville is to dampen an intimate mixture of 105 parts of wheat starch and 10 parts of powdered iodine with a mixture of 10 parts of alcohol and 40 parts of water.

Aqua Destillata.—The Netherlands Pharmacopœia directs to add enough solution of permanganate of potassium until the water retains a faintly purple colour, then sufficient of a solution of alum until a faint acid reaction is produced, next to distil and to reject the first and the last third.

Aqua Rosæ.—If distilled over a naked fire the product is of a finer quality.

Arnica Flores.—The ray-florets are provided with sixteen nerves, which distinguishes them from admixtures.

Caryophyllus.—Hirsch detects already exhausted cloves by the yield of alcoholic extract. Cloves yield ordinarily 30 per cent.; spent cloves seldom more than 5 per cent.

Gossypium.—"Immediately" sink (in water) depends on whether the cotton thrown on the water is in a loose state, or previously compacted.

Influence of Saccharin on Digestion.—Experiments made by Stiff show that 3 grammes of saccharin per day produced a slight purgative action, and afterwards a loss of appetite. It also, in large quantities, delayed the solution of albuminoids, which was not complete after twelve hours' contact with gastric juice.

Liquor Potassæ, &c.—The stoppers should be coated with paraffin.

Mel Despumat.—*Preparation.*—Heat the honey in a tall cylindrical vessel on a water-bath, until all the impurities have risen to the top, withdraw the heat, and pour carefully cold water on top of the honey, when the impurities will float on the water, and can be removed.

Oleum Rosæ.—It appears that the oil from white rose contains more stearopten than that from red rose, which latter, however, yields a more fragrant oil.

Pilulæ Opii.—Oldberg objects to the soap, which should never be employed with alkaloids or chemicals.

Sodii Arsenias.—The salt containing $7\frac{1}{2}$ mol. (40.8 per cent.) of water of crystallisation is neither deliquescent nor efflorescent. This salt is easily produced by exposing the crystalline salt (containing more or less than $7\frac{1}{2}$ mol.) in fine powder to the air at the ordinary temperature.

Tincturæ.—Oldberg and Wall think that the strength should be fixed with reference to their properties and uses, and their relative potency, instead of having regard to simple mathematical ratios.

Unguentum Diachylon.—*Preparation.*—Dissolve 200 grammes of acetate of lead in 1 litre of distilled water, and 300 grammes of castile soap in $1\frac{1}{2}$ litre of warm water, filter both solutions, mix, wash the precipitate, and, after drying, melt it with $1\frac{1}{2}$ part of olive oil, triturating the plaster until cooling.

Metropolitan Reports.

CHEMISTS' ASSISTANTS' ASSOCIATION.—The next meeting of this Association will be held on Thursday, October 31, when a paper on "Photo-micrography," with practical illustrations, will be read by Mr. M. E. Swan.

WESTMINSTER COLLEGE PHARMACY CLUB.—The general meeting was held on Tuesday evening last at 8.45, when rules were adopted. Thirty-one new members were enrolled. An inaugural address will be delivered by the President, Mr. G. S. V. Wills, at the Bridge House Hotel, London Bridge, on Tuesday next at 8.45 o'clock. Former students and gentlemen interested are invited to attend.

THE MILK OF SULPHUR PROSECUTION.—At the meeting of the Islington Vestry on Friday night last, Mr. Stonelake drew attention to recent prosecutions under the Sale of Food and Drugs Act instituted by the Vestry; and, making special mention of the prosecution of Mr. Gray, chemist, of Canonbury, in the milk of sulphur case (fully reported in *THE CHEMIST AND DRUGGIST*, August 17, 1889), Mr. Stonelake thought competent persons should be employed to take out summonses, so as to ensure a fair prospect of success when the case came before the magistrates. At present the prosecutions were instituted by the sanitary superintendent instead of by the solicitor. Then, again, with regard to the milk adulteration, it would be well if the officers read up the law on the subject, as several cases had been lost because of the magistrate holding that a guilty knowledge of the defendant must be proved in regard to the alleged adulterations. The Vestry clerk explained that the solicitor did at one time conduct such prosecutions, but they became so numerous that it was thought the sanitary superintendent might take the work. The result of this was that the Vestry did not get their costs, and otherwise they were in an invidious position. Mr. Stonelake moved:—"That in future prosecutions by the Vestry under the Food and Drugs Act be conducted by the Vestry clerk or solicitor." The motion was seconded, but not adopted.

A CHEMIST AND HIS PARAMOURS.—TRAGIC POISONING CASE.—An inquest was held at the Royal Oak, Glenthorne Road, Hammersmith, into the circumstances attending the death of Ellen Beecroft, *alias* Ellen Harding, otherwise Dawson, a dressmaker, who died early on the morning of October 15. On the morning of Tuesday, October 15, a little before 1, deceased, in her nightdress, and accompanied by an errand-boy who lived in the same house, went to the shop of Mr. Pollard, chemist and druggist, Glenthorne Road, and, being admitted, found another woman in the house. According to the evidence of the boy, deceased had been drinking; some words ensued; Mr. Pollard reached down a bottle of prussic acid, and intimated he would take poison. He handed the bottle to the boy to hold while he fetched a measure. The woman snatched the bottle from the boy, and took three gulps from the bottle. After some hesitation a policeman was fetched, and subsequently a doctor, but the woman was dead when the latter arrived. The following evidence, as reported in the *West London Advertiser*, will explain the circumstances:—

Alfred Pollard, chemist, of 21 Glenthorne Road, having been duly cautioned, said: I am perfectly willing to give evidence. I have known the deceased eight months—slightly at first, intimately afterwards. She did not stay at my house. She came over on Monday night between twelve and one in her nightdress.

The Coroner: What took place then?

Witness hesitated before answering: She thought I had somebody within.

Do you mean a woman?—Yes, a woman, and she wanted to get at her. (Another pause.) I held her back while I let the other woman out. Then she abused me a little (there was another pause and a few inward groans)—oh, it didn't amount to abuse—

The Coroner (coming to his relief): Then she abused you?—Well, no; she showed herself very much annoyed at my having "gone elsewhere." (These two last words were muttered.)

Annoyed at what? asked the Coroner.

At my having taken in the other—gone with any other lady.

Well?—Out of pure bravado I said, I will get out of this. I put my hand round amongst the poisons in the shop, and took down a bottle that happened to be, but might not have been, hydrocyanic acid. I told the boy to hold the bottle while I got a 2-drachm measure. When I came back she had evidently taken the poison, but I did not know it then. Well, being prussic acid I knew it would mean either that she would be killed or that she would not. As she was still breathing I recalled the boy, whom I had sent for a policeman, as I wanted to save her reputation and mine; and not until I was quite sure she was dead did I send for a policeman.

When you brought this bottle out of the shop, did you see what it was?—No, sir.

Did you say you would take some?—Yes, but I hardly knew what it was myself.

Dr. Alderson said he lived almost opposite, and found the deceased supported by Mr. Pollard. She was quite dead, and the pupils were dilated. He detected prussic acid in the breath. Witness was told by Mr. Pollard that she had taken the poison about forty minutes before. Witness remarked, "Why didn't you send for me before?" and he replied, "What's the use? Either she would die or she wouldn't, and I wasn't sure she had taken the poison, or even if she had it was a weak solution that was inert, and with which I had ineffectually attempted to poison cats." Witness censured him, and he said, "You forget I am partly a medical man." Witness said, "What have you done for her? Your medical knowledge, if you had any, would have told you that promptness was important. Forty minutes is a long interval." Mr. Pollard gave him some reasons, and said he wanted to sever his connection with her, and so the row began. Witness asked him how the bottle got into her hands—why could he not have prevented it? He said he had gone for a measure to poison himself, but it was only a threat. Mr. Pollard did one good thing, he had taken her to the air in the yard. No doubt he was in a very excited state, and one was not likely to act at such moments as one would when calm and collected. Witness, however, told him that he ought to have sent for a doctor, for even in a case like that himself, he (witness) would have obtained a second doctor. No doubt Mr. Pollard thought it was hopeless, but there were instances of recovery when the patient had lingered more than half an hour. Witness had made a post-mortem, and he imagined, from the quantity of poison present, that death was quicker than 40 minutes. Her stomach gave undoubted evidence of prussic acid.

A Juryman: Do you think, if prompt measures had been taken, that she could have recovered?

Witness: That depends upon the dose. The largest dose on record taken by a person who recovered I find to be 2 drachms. The acid in question is a very strong solution—stronger, in fact, than I might use myself. The boy says she took two or three gulps, and it is just possible that she may not have felt the first or second dose, and taken 2 or 3 drachms; if so, no power on earth could have saved her. Still, I feel certain he ought to have sent for me at first. Mr. Pollard said she lived 40 minutes, and for that reason he ought to have obtained aid or administered remedies, as it was just possible she could have been saved. It is very doubtful, however, that she lived that time.

The Coroner, in summing up, said if the jury found that Mr. Pollard had contributed to her death by putting it in her way, then it might possibly amount to manslaughter on his part.

The jury were a quarter of an hour considering their verdict, and it caused some surprise when it became known that they had found one of "Misadventure." A rider was added to the verdict censuring Mr. Pollard for putting the bottle in the deceased's way, and for neglecting to send for medical aid earlier.

NEW WORK ON CHEMICAL TECHNOLOGY.—Messrs. J. & A. Churchill will shortly publish a work on "Fuel and its Applications," by Prof. E. J. Mills and Mr. F. J. Rowan, which will form the first volume of the work on Chemical Technology to be brought out under the editorship of Mr. C. E. Groves, F.R.S.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor will much oblige.

BIRMINGHAM.

MR. MARTIN MAGOR, chemist, of Birmingham, has caused to be distributed at nearly all the meetings of the Temperance Congress, sitting in the city this week, a handbill containing a very neatly worded recommendation of his phosphor tonic.

THE PEPPERMINT LOZENGE TRADE.—Messrs. Bellamy & Wakefield, 1 Easy Row, Birmingham, tell us our correspondent was in error in saying they had bought four tons of peppermints for the winter trade. The statement should have been that they have bought one ton for the fourth time. They remark: "A ton of one kind of lozenges is an enormous quantity for a retailer to purchase at once, 'four tons' savours of the 'Arabian Nights.'"

THE USURPERS.—Miss F. Brittain, dispenser at the Skin and Lock Hospital of this city, passed the examination of the Pharmaceutical Society last week, and qualified as a chemist and druggist. Miss Moore, a former pupil of the hospital, has also passed at Apothecaries' Hall, and has been appointed resident dispenser at Dr. Barnardo's Medical Mission in the East-end of London. Miss Cook, another pupil, has been elected dispenser to the Children's Hospital, Brighton; while Miss Bowen, formerly an assistant here, now holds the appointment of dispenser and registrar to the Ear and Throat Hospital, Great Charles Street.

THE PUBLIC ANALYST.—At the meeting of the Warwickshire County Council held Saturday last at Warwick, Mr. Darlington said that the fees of the county analyst (Dr. Bostock Hill) were increasing. They were estimated at 220*l.*, but had risen to nearly 400*l.* The analyst was paid partly by fees and partly by salary, and there was no limit to the number of samples sent to him, except in the discretion of the sanitary inspectors. He thought the time would come when it would be a saving to the county to pay the analyst a fixed salary and have his whole time. During the last quarter 111 samples had been analysed, chiefly milk and butter; drugs had not even been alluded to.

A NEW PHARMACY BILL.—The Birmingham *Daily Times* has information that the Pharmaceutical Society is going to bring a Bill forward which will prevent hairdressers, or anyone else except chemists, selling such aids to beauty and attractiveness, as cosmetics, hair-restorers, or, perhaps, even shaving paste, which contain arsenic, or other poisons to be included in the schedules. In consequence, says this authority, "a meeting of the [shaving] trade is to be held in the city, when an indignant protest will be made against the curtailment of their privileges and profits." It may save the clippers some unnecessary talk if they are reminded that the Bill which they are going to protest against was passed into law in 1868.

MIDLAND COUNTIES CHEMISTS' ASSOCIATION. — The classes for pharmaceutical students in connection with this association have been commenced. The lectures are delivered at the Educational Chambers, 90 New Street. In the Preliminary section the classes meet on Monday and Wednesday evenings. Two subjects are taken each evening. The Minor section includes instruction in chemistry, botany, materia medica, pharmacy, and practical dispensing. A collection of autograph prescriptions will be provided, and arrangements will be made for the formation of a class for practical dispensing if a sufficient number of students be forthcoming. The lecturers are: Preliminary, Mr. Stokes Dewson, pharmaceutical chemist (honours). Minor, chemistry and chemical physics, Mr. Stokes Dewson; botany and materia medica, Mr. F. H. Alcock, F.I.C. (Pereira medallist); pharmacy, Mr. Geo. E. Perry, F.C.S., pharmaceutical chemist.

LIVERPOOL.

CHEMISTS' ASSISTANTS' SOCIETY.—The first meeting of the second session was held in the drawing-room of the

Young Men's Christian Association, Mount Pleasant, on Friday, October 18. Over thirty members were present. After the election of twelve new members, Mr. Harold Wyatt was unanimously elected president, and in thanking the meeting for the honour it had done him referred to the misfortune the society had sustained by the loss of the late president, Mr. Thornton, and of Mr. Fleetcroft, the vice-president, who had both left the city. Mr. Johnson was elected vice-president. It was resolved that letters of thanks be sent to the two retiring officers for their exertions on behalf of the society during the past session. Mr. Walker, the honorary secretary, announced that the next meeting, for which a paper had been promised, would be held on Thursday, October 31, at Colquitt Street. The remainder of the evening was occupied with vocal and instrumental music, in which three ladies assisted.

REGISTERED ASSISTANTS.—The articles in THE CHEMIST AND DRUGGIST respecting the proposed prosecution of an unregistered assistant for the sale of poison have caused some discussion amongst members of the trade here, but no consensus of opinion can be arrived at until after its consideration at a general meeting. But the following epitome of a statement made by the late Mr. Warhurst, the Parliamentary session before last, when the House of Lords added the "Managers" clause to the Pharmacy Bill, may be of interest at the present time. Mr. Warhurst was a registered chemist and druggist, and a member of the Pharmaceutical Society, who opened a large number of chemist's shops in Liverpool, and was generally regarded as the man who made the above clause necessary. In the course of an interview he said:—"It does not agree with my health to keep indoors and attend to the details of one shop, so I have opened a number of branches, and drive from one to the other, spending some time in each, and looking after the general interest of the whole. I have now sixteen shops, and about half of them are under my direction conducted by unregistered persons. It would be unfair to say that these men are unqualified; I always get a reference as to character and qualification with any man I engage, and if I find him deficient in either I do not hesitate to get rid of him promptly. Most of these men are married, some with families, and, of course, the proposal to take the bread from their mouths is a serious one for them. It is a serious matter for me also, for I find them as a rule good business men, and they continue with me longer than those who are registered." On being asked if he had not additional anxiety with those shops in which he had unregistered men, he replied, "Certainly not. I don't wish to say a word against examinations, but they do not teach a man whether he ought or ought not to supply a poison to a person who asks for it. That is entirely a matter of judgment, and an unregistered staid and responsible man of 30 or 40 is more likely to exercise discretion in such a matter than a young man who has little experience in business, but has devoted himself almost entirely to preparing for examinations. Then, as to mistakes, those happen far more frequently from carelessness than from ignorance." Mr. Warhurst had considerable influence with several members of Parliament, and these after due consideration undertook to oppose the Pharmacy Bill to their utmost unless some provision was made for protecting the existing interests of unregistered managers.

LOUGHBOROUGH.

W. S. HANDLEY, the son of Alderman Handley, chemist, of this town, has gained the 100-guineas scholarship in arts at Guy's Hospital, London.

FOR MUNICIPAL HONOURS.—The chemists are again coming forward in the municipal contest. Mr. H. L. Gibson offers himself as a candidate in the Conservative interest for the Storer Ward, and Mr. John Paget (retired chemist) as a non-political candidate for the Burton Ward.

MANCHESTER.

PHARMACEUTICAL ASSOCIATION.—The two or three sentences of mild criticism which appeared at the tail of the report of the last meeting of the Manchester Pharmaceutical Association must be modified to the extent of explaining that it was not at a meeting of that Association, but at a

meeting of the Chemists' Assistants' Association, that no quorum could be got to listen to a paper which had been prepared. Except as to that detail, what was said as to our local Association need not be unsaid, and more than one gentleman connected with the trade joins me in the hope that it may have the desired effect of helping to arouse a more widespread interest in trade matters in Manchester. Session 1888-9 opens hopefully. It is whispered that the new departure in the form of a social meeting, which was under discussion at the opening meeting, may probably take the form of a smoking concert, but nothing definite has yet been decided.

NEWCASTLE-ON-TYNE.

CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.

—The session was inaugurated on October 16, by an address from the president, Mr. John Pike. After a few remarks disclaiming anything like opposition to the older association of the town, Mr. Pike said:—When we take a look at our profession, I think we may well be excused if we feel somewhat disappointed and pessimistic. Some twenty years ago, when I first entered the trade, I became at once an enthusiast, and I felt myself to be at a bound several rungs higher on the social ladder. There appeared to me something sacred in the handling of drugs, and, being naturally of a contemplative frame of mind, I never made pills or potions without speculating upon the effect they would produce, and wondering where they would find their final resting-place, and, as I daresay most of you have done, I experimented upon my own personal economy, taking, I believe, some two pills daily of various compositions; all, of course, in the interest of the drug trade. I soon tired of this kind of thing, however, and became as *désillusionné* as any one of you could be. I remember the indignation excited among the local craft when one of our Philistine brethren started to sell 13½d. patents for 1s. He was looked upon for some time as a sort of pharmaceutical Jack the Ripper. But, in spite of this, fairly good business was done, and no doubt money was made more easily than at present. But we had some drawbacks, the most important of which was the almost total absence of educational facilities. It is true that a lad could, if he had the requisite time and spare cash, take lessons in chemistry, but educational opportunities as we understand them now were hardly dreamt of, so that with the growth of competition we have increased facilities for making ourselves fitter to battle with life and to take our places in this world's struggle.

It is now possible, as you can see on a reference to the calendar of the University of Durham College of Science, for evening students who have passed their several examinations and gone through the prescribed course of studies to take the university degrees, such, for instance, as the Associate of Arts or Science; but here we come to a great stumbling-block, in most cases insurmountable, in the way of the ambitious chemist. Our present Preliminary examination is not up to the standard required, and is not, as a matter of fact, recognised by, so far as I am aware, any examining body of the professions which would naturally attract the attention of a chemist, as, for example, the medical profession. [It is, though.—ED.] The absence of algebra and Euclid, mathematics, French or German, and English literature and geography, is fatal to the pharmaceutical student ever taking an equal position to that of the medical student; and we must recognise the absolute necessity of advancing with the times—we must increase our stock of knowledge.

Professor Tilden (himself at one time, I believe, an apprentice), in his speech to the Midland Counties Chemists' Association, said that during his school-life a boy should learn as much pure physics, chemistry, and botany as ought to be required for the purpose of his technical studies; add to these a knowledge of mathematics and the languages which such a school-training would assuredly give him, and here we have a lad with some prospect of making headway. A youth at the expiration of his apprenticeship often finds that he can conveniently change and alter his vocation for a better, and now finds himself heavily handicapped, from the fact that his preliminary education has not been what it should be.

Mr. Pike went on to recommend to chemists' apprentices the examinations of the Institute of Chemistry, those of the

Kensington Science Department, and of the City and Guilds of London Institute, all of which are within the scope of the industrious student. He urged that the Pharmaceutical Society should try to extend the schedule of the Pharmacy Act to a great many more dangerous medicines. He believed that, taking an estimate of the drugs named in Martindale's "Extra Pharmacopœia," hundreds of drugs and preparations would be found requiring the most careful, skilful, and enlightened handling; and he thought the Society might, by serious and properly directed effort, so increase the length of the schedule as to materially benefit the qualified and educated chemist. Quoting from Mr. Gilmour's address at Dundee, Mr. Pike recommended as hobbies, the microscope, the camera, and electricity, and he further supported Mr. Gilmour's advice as to criticism of papers read at their meetings.

Mr. T. M. Clague and Mr. G. Weddell, hon. presidents of the Association, in a few well-chosen remarks, respectively moved and seconded a vote of thanks to Mr. Pike for his address. Messrs. Curwen, Park, Oxen, and Merson also made a few remarks.

WALSALL.

SUICIDE OF A BLOXWICH CHEMIST.—Mr. A. J. Newton (35), chemist, of Bloxwich and Caldmore, Walsall, committed suicide on Sunday last at his residence at the former place. It appeared that he went into his bathroom in the morning as usual, and as he remained there a prolonged time his wife went to see if anything was the matter, and found him with a pot of nux vomica beside him, and evidently suffering acutely. In answer to her questions, he admitted that he had taken some of the drug. Dr. Hubbard, who was called in, used the stomach-pump, but remedies were unavailing, death ensuing soon after. An inquest was held on Tuesday on the body of the deceased. The evidence showed that Mr. Newton had been suffering from sleeplessness for about five weeks, and had taken laudanum to induce sleep, but without effect. Shortly after deceased was found by his wife he admitted having taken 2 drachms of the nux vomica. The stomach was thoroughly washed out, but the poison had got into the system, and death soon followed. The medical evidence was to the effect that deceased had taken sufficient poison to kill thirty people, and the doctor expressed the opinion that the fact of the deceased being a chemist, and well knowing the pain which nux vomica would cause, was an indication that he could not have been in his right mind. The use of tincture of opium would be likely to bring about temporary insanity. After an hour's consultation the jury found that deceased died from the effects of poison administered by himself, and that he was at the time of unsound mind, but that there was no evidence to show whether he took the poison accidentally or otherwise.

IRELAND.

The governors of Steevens' Hospital, Dublin, invite tenders for a twelvemonth's supply of drugs and medicines.

The Dublin Railway Rates Association has voted 100% to aid the Irish Conference in carrying out the opposition to the railway monopoly.

MR. MILLS has been appointed dispensary officer (L.T.) to the Coleraine Dispensary, and Mr. Boyd to a similar position at Hillshorough.

FOR threatening to burn down the Waterford Workhouse dispensary, a pauper named Athbridge was last week sent to gaol for three months.

OUT of a number of candidates for the office of township commissioner at Dalkey, Mr. G. D. Beggs, M.P.S.I., the Medical Hall, was last week returned at the head of the list.

THE Board of Guardians of the Cork Union have appointed Messrs. Harrington, pharmaceutical chemists, contractors for the supply of drugs and medicines to the workhouse and the neighbouring dispensaries.

THE death is announced at Port of Spain, Trinidad, of Professor John McCarthy, Government analytical consulting chemist and professor of chemistry, formerly of Dublin. The late professor was only 36 years of age.

MR. WILLIAM WEBB, for many years manager of the Irish Apothecaries' Hall, and who lately resigned that position, has been appointed Dublin representative to Messrs. Herring & Co., London.

THE Fellows of the King's and Queen's College of Physicians, Ireland, have presented to Dr. Aquila Smith, lately their representative on the General Medical Council, an excellent portrait of himself done in oils.

FAITH-HEALING.—Some remarkable scenes are reported from the Kerry district of Ireland, a number of cures being said to have been accomplished by the laying on of hands and imbibing of medicinal spring water.

THE Ballymahon dispensary, Longford, was last week destroyed by fire, the origin of which is unknown. A large quantity of drugs and medicines was lost, and the caretakers had a narrow escape for their lives.

MR. THOMAS VICTOR MAYNE, photographic chemist, Lord Edward Street, Dublin, died last Saturday from an attack of typhoid fever. The deceased, who was a partner with his father, Mr. Thomas Mayne, M.P., was a general favourite in the trade.

BY the will of Mr. D. Cullimore, B.L., Ballymena Park, county Wexford (uncle of Dr. Cullimore, London), the Wexford Infirmary has been left over 1,000*l.* for the purchase of the best medicines and the most approved surgical appliances.

On *dit* that the Dublin branches of the London and Newcastle Tea Company are arranging to open drug and patent-medicine departments in connection with their stores, and with a view of pushing the sale of their Bohea purpose to "cut" the chemists at cost price.

AN ITINERANT PHARMACIST.—The suburban residents of Dublin have for the past few days been visited by a venerable individual, whose invitations to try his "Japanese nerve-tonic pills" have been responded to with more or less eagerness. This invention is said to be a compound of rhubarb.

EMBEZZLEMENT BY A DRUGGIST'S ASSISTANT.—At the Limerick Quarter Sessions held last week Robert J. Gubbins, an assistant in the employ of Messrs. J. P. Evans & Co., druggists, George Street, Limerick, was sentenced to eighteen months' imprisonment for systematic embezzlement of various sums, amounting in all to about 200*l.*, which belonged to his employers.

DUBLIN PHILOSOPHICAL CLUB.—At a meeting of this society held last week arrangements were made to hold an opening session in the University College early in November, when Dr. Molloy will exhibit and lecture upon the electric light. The following pharmacists were elected office-bearers for the coming year:—Mr. J. E. Brunker, M.A., F.C.S., vice-president; Mr. W. N. Allen, honorary treasurer; and Mr. H. C. Draper, F.C.S., honorary secretary.

SUBVERSION OF WELLS & Co.'s HOBBY.—With this heading we get the following item from a Belfast correspondent. We have no idea what it is all about:—"Sir,—Something new at last! The absorbing topic among business circles this week is that some fourteen of our principal chemists and druggists have formed a syndicate, the result of which will be cutting all round. Negotiations are being completed with a view to have eight old-established houses turned over, and about four new ones to be immediately opened. What will Wells & Co. think now of their policy? Always hard to get a kick at an Irishman, especially when it is a hot-headed one. But there is another side to the question. 'It is an ill wind blows nobody good.' What will the I.P.S. say about the English qualification?—REX."

SCOTLAND.

ABERDEEN.

MR. STEPHEN PATERSON, on behalf of Messrs. W. Paterson & Sons, applied for, and has obtained, a certificate from the magistrates to hold a licence for the sale of wines, &c. The presiding magistrate said:—"This application was made to enable the firm to deal in medicated spirits, wines,

&c." A local evening paper, quoting this, put it "methylated."

EPIDEMICS.—The epidemic of measles is now virtually at an end, only twenty-one cases having been reported during last month, the total reported since December 1 last being 2,493. As one epidemic is disappearing, another, in the form of scarlet-fever, is threatening to appear.

DUNDEE.

MORE MEDICALS.—Dundee appears to be a happy hunting ground for medical men. Three new ones have already taken up their abode here this year, and now Drs. Buist and Pirie are announcing that they have commenced practice.

ALPE WAS NOT THERE.—Since the last of the summer months the Inland Revenue officers have been specially active in Dundee. Wholesale consignments of chemists' goods have been sent to Somerset House, and already eight pharmacists have paid modified fines. Some of the items were liable because they were called "specialities, prepared by —," and others because they were recommended as a cure for an ailment, and others because of their having "prepared only by" on the label.

SELLING A DRUG BUSINESS.—In the Court of Session, Edinburgh, last week three appeals were heard against the decision of Sheriff Campbell Smith, in regard to the sale of a doctor's shop carried on for some time under the protection of Dr. M'Gregor, Dundee, by James Rogers, sen., and James Rogers, jun., who are not registered chemists. In one of the actions Dr. M'Gregor sued the Rogers for 250*l.*, loss sustained by him in consequence of their having broken their arrangement with him as their nominal partner, and transferred to Dr. Kelly, Dundee, all his rights and privileges in their business in Dundee. Defenders denied this, and Sheriff Smith sustained their plea, dismissing the case on a technical point. Dr. M'Gregor appealed, and the Court of Session has dismissed the appeal.

CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.—A meeting was held on Thursday, October 17, Mr. Donald McD. Skinner, vice-president, in the chair. Mr. J. B. Mason, teacher of chemistry at the Young Men's Christian Association, read a paper on "Sodium and its Salts." The paper (which was illustrated with experiments) was very attentively listened to, and at the close a hearty vote was accorded to the authors. The secretary then, in the name of Mr. James Anderson, handed over the microscope which that gentleman had presented to the Association. The donor was accorded a hearty vote of thanks for his gift. The first social evening will be held next Thursday, October 31.

The Association again met on Thursday evening, when Mr. T. Cuthbert Henderson read a useful paper on "Some Medicinal Syrups." The first one considered was *Syrup of iodide of iron*. The author discussed the various methods which have been proposed from time to time for the preservation of the syrup; among them he had found the addition of 0.1 per cent. of hypophosphorous acid to be the best, but nothing in his experience was equal to the addition of 5 per cent. of glycerine. This agent, being a polyhydric alcohol, acts like other alcohols by reducing any ferric salt to the ferrous state as soon as it is formed. After giving the members a warning to be careful in the selection of sugar for syrups, the author proceeded to comment upon *Syrup of bromide of iron*, Martindale's and the B.P.C. formulae being criticised. Of the two he much preferred the former, which is made by heating together ferrous bromide 160 grains, iron wire 10 grains, and water 3 drachms, until colourless, filtering, and making the filtrate up to 4 fluid oz. with simple syrup. In the B.P.C. process so much heat is generated that it is difficult to control the chemical action, and a "burst" is very apt to supervene. The syrup is also the better for the addition of 5 per cent. of glycerine, or 0.1 per cent. of hypophosphorous acid. *Easton's syrup* was next referred to. A sample of this containing 5 per cent. of glycerine was shown, which had been kept for four months, and retained its water-white colour. After some remarks on Parrish's syrup, Mr. Henderson spoke of the variable nature of the *Syrups of hypophosphites* which are met with in the market, and as the result of his experience in the laboratory of the Royal Infirmary submitted the following

formula, which he had used for two years, and the product from which he had found to keep exceedingly well:—

Strychnine	1 grain
Quinine (pure)	40 grains
Manganous hypophosphite	40 "
Hypophosphorous acid (30 per cent.)	2 drachms
Water	1 oz.
Di solve and filter.	
Sodium hypophosphite	160 grains
Calcium	160 "
Strong sol. of ferrous hypophosphite (B.P.C.)	3 fl. oz.
Dissolve and filter.	
Mix these two solutions and add to—	
Glycerine	4 fl. oz.
Syrup (cold), to produce	20 oz.

Each drachm of this syrup contains strychnine, $\frac{1}{160}$ grain, and quinine, $\frac{1}{4}$ grain, together with the metallic and alkaline hypophosphites. In speaking of syrup of tolu, Mr. Henderson referred in warm terms to Mr. F. Stephenson's cold process; he also suggested that *syrup of squills* should be made by dissolving 2½ lbs. of sugar in a pint of squill vinegar *without heat*. This can easily be done in a mortar. An excellent clear syrup is the result, and it does not become covered with fungus as is sometimes the case with syrup which has been overheated. In concluding his paper the author briefly referred to glycerine. A good discussion followed.

EDINBURGH.

THE EDINBURGH CHEMISTS' BALL is to be held in the Assembly Rooms on January 23, 1890. A committee has been appointed, with Mr. J. P. Thomson as convener.

THE CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION begins its twelfth session on Wednesday, October 30, at 9.15 P.M., when Mr. A. Russell Bennet (President of the Association) will deliver an inaugural address.

GLASGOW.

GLASGOW CHEMISTS' AND DRUGGISTS' ASSISTANTS' ASSOCIATION.—A smoking concert, under the auspices of this Association, was given in Ansell's Rooms on Wednesday, October 16. Mr. James Robb occupied the chair, and there was a large company present, who entered with the keenest zest into the evening's proceedings.

"THE PAWNEE MEDICINE-MAN" has this week commenced operations in Glasgow. During the day his gorgeous gilded chariot, with its band of very wide-awake hatted musicians, and a waggonette, in which is seated in solitary grandeur a dusky Parsee in native costume, parade the principal streets; and every evening the great "medicine-man" gives exhibitions of his skill in dental surgery and the treatment of disease in the National Hall. The serious business is agreeably diversified by a miscellaneous entertainment, including a series of "inimitable imitations" by the aforesaid Parsee, and the distribution of the "Medicine-man's" "Hindu Balm," which is supplied gratis to poor people on production of a minister's "line." If "imitation is the sincerest form of flattery," Sequah may feel proud.

"MAISTER PETER LOWE" is the title of a neat little volume just issued, in which the author (Mr. Finlayson, of Glasgow) gives a piquant account of the life of that quaint old character, Dr. Peter Lowe, the founder of the Glasgow Faculty of Physicians and Surgeons, who spent many years in France as "Physician Ordinaire to his most Christian Majesty the King of Navarre," and on his return to his native place was so profoundly disgusted with the prevalence of quacking blood-letting by barbers and the sale of impure drugs, that he at once set about procuring a charter to incorporate a society of the regularly-qualified medical men of Glasgow, and empowering them to impose conditions of training tests of competency and an inspectorship of drugs. In this undertaking, after much effort, he was eventually successful, and in the now superfluous visitor yearly appointed by the Faculty to inspect the drug-shops of the city we have a lingering relic of "Maister Peter Lowe's" once much-needed reform. The worthy doctor died in 1612, and his somewhat whimsical monument in the Cathedral churchyard is reverently preserved by the Faculty he founded.

INVERNESS.

THE chemists' assistants and apprentices of Inverness have just formed themselves into an association, their principal object being to further their studies for the different examinations. Mr. Fraser, High Street, has been elected president; Mr. Bethune, Academy Street, vice-president; and Mr. Andrew Ross, 15 Castle Street, secretary. A certificated teacher has been engaged to instruct those who have not as yet passed the Preliminary examination, and two qualified chemists have kindly offered to instruct those for the Minor examination. A first-class materia-medica cabinet has been got; also a complete set of apparatus for chemical analysis. As the Association starts with a fair amount of funds in hand, it bids fair to be a success. The session was opened on October 24 by an address from the president.

General and Provincial News.

HATRICK & CO. (LIMITED).—Capital, 4,000l. in 17 shares. Objects, to acquire any interests or rights in any secret processes for the manufacture of patented medicines, &c. James Lindsay Hatrick, of 10 Bute Gardens, West Hillhead, Glasgow, is appointed managing director.

PUNISHED ENOUGH.—At the Bolton borough quarter sessions on Wednesday, James Grady, a labourer, indicted for attempting to commit suicide on August 22 last, by taking a quantity of carbolic acid, was bound over to enter into his own recognisances to come up for judgment when called upon.

LICENCE TO SELL MEDICATED WINES.—The Commissioners of Inland Revenue, Somerset House, have granted an interim off-licence to Mr. A. Parker, chemist, High Street, Uttoxeter, for the sale of medicated wines. Mr. Parker applied for the necessary licence at the adjourned brewster sessions, but failed to obtain it, owing to a mistake made in the form of notice, the application being opposed by Mr. Smith, on behalf of the Licensed Victuallers' Association.

THE SOCIETY OF APOTHECARIES.—By many members of the medical profession it is thought that the Society of Apothecaries ought to be empowered to grant distinguishing titles to the students who pass their examinations. At present, though a man may qualify in medicine, midwifery, and surgery, he is only able to term himself L.S.A., letters that can be adopted by all who are only just qualified to practise. Mr. R. R. Sleman, of 7 St. Benet's Place, Gracechurch Street, who has the matter in hand, has framed a petition to the General Medical Council of Education and Registration. It runs as under:—"We, the undersigned licentiates of the Society of Apothecaries of London, who have passed a qualifying examination in medicine, midwifery, and surgery since July 1, 1887, such examination having been conducted in accordance with the recent Medical Acts, humbly pray the General Medical Council to give us such title, or titles, as will convey to everyone the increased scientific status which such further study must necessarily confer. At the present time, although trebly qualified, our only title is L.S.A.; this being the same as that which was granted to those who passed the final examination of the Society of Apothecaries of London when there was no examination in surgery, and when the regulations of the Medical Amendments Act were not in force. Hoping that, in all fairness, our humble request may be granted, we are," &c.—*City Press*.

ACCIDENTAL POISONINGS.—An inquest was held at Forest Hill on October 15 by Dr. Carttar, the coroner for West Kent, on the body of a boy named Stevens, aged 4. The deceased had purchased on the previous Saturday half a sheet of coloured transfers, and had made use of them by first wetting each with his tongue and then licking the impression off his hand. The same evening he was taken ill, and although the doctor was called in, he died the next morning. The inquiry was adjourned for a month to admit of the contents of the stomach and the colouring of half a sheet of stamps being analysed.—At Leicester on October 17 a man named John Lewin was poisoned by inadvertently

drinking spirit of salts instead of gin. A medical man was at once called in, and an antidote administered, but Lewin died the same evening.—An inquest was held at Hastings on October 17 on the body of a child, aged 2, the son of a police-constable. On the previous Friday the father was cleaning the buttons of his tunic with nitric acid, and during his temporary absence from the room the child drank from the bottle containing the acid. An emetic was at once given, and the doctor sent for, but the child died on the following Thursday from the effects of the poison.—Last week Mr. F. T. Sylvester, coroner for the Melksham district, near Bristol, held an inquest on the body of a little child named Winifred Browne. It was ascertained on post-mortem examination that the child had eaten phosphorus paste. A piece of bread with the paste spread on it had been missed, and it was thought the mice had eaten it, but it is now supposed that the child had picked it up and eaten it. This supposition came out at the coroner's inquest.—The Süsses County Coroner held an inquest last week on the body of Alice Rosine Stacey, aged 3, who died on the previous Saturday. The child was taken ill in the middle of the night, and vomited a great deal. This continued all the next day, and Dr. Longford was called in and attended the deceased up to the time of death. Dr. Longford, after examining a portion of the vomit, found it contained heart-cases, and was of opinion that death was caused by vegetable poisoning. A verdict to that effect was returned.—An attempt has been made to poison Father J. A. Kelly, of Oneida, New York State, whilst celebrating mass at St. Patrick's Church in that town. After drinking the sacred wine he felt a burning sensation in his stomach. He was assisted into the vestry, and, suspecting poison, at once took an emetic. A doctor who was called in saw that the symptoms were those of arsenical poisoning, and at once administered antidotes. In the vestry traces of arsenic were found on the table, as though some of the poison had been spilled while being poured. Analysis showed that the bottle of sacramental wine contained large quantities of arsenic.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

HONEY FERMENTATION.—M. Gastine, after experimenting with hydromel and other fermented honey preparations, has come to the conclusion that the reason why fermentation so often fails is that honey is too pure to afford to yeast cells the mineral substances necessary to their development. He has found that on adding to honey solutions less than one half of 1 per cent. of a mixture composed of ammonia, potassa and lime phosphates, tartrates and sulphates, when yeast is introduced under the ordinary conditions, complete and rapid fermentation is readily obtained. The proportion of the various salts is not very different from that found in ordinary grape must, only their quantity, as compared to the total liquid, is a great deal smaller; which explains at the same time why the making of hydromel will succeed so well in old wine tuns and fail in new vessels.

A STATUE TO J. B. DUMAS, the chemist, was on October 21 inaugurated at Alais, his native town. M. Faye, as minister, presided. But the event of the day was an address by Pasteur, who now but seldom speaks in public, relating the career of his old friend and many instances of his kindness and benevolence. Minister Faye, Baron d'Estrella (delegated by H.M. the Emperor of Brazil), and Academicians Gaston Boissier, Gautier, and Darboux also made short speeches, recalling that Jean Baptiste Dumas was not only a chemist but also a proved statesman and an elegant writer. After the ceremonies the Agricultural Society, on behalf of silk-growers, presented to Pasteur a heather sprig made of silver, with golden cocoons, in token of gratitude and thanks for his cure of the silkworms' parasitic disease.

THE MORGUE FREEZING RECEIVER.—Some time since Dr. Brouardel organised at the Paris Morgue special refrigerating rooms to preserve unaltered such unknown human remains as might lead to the detection of criminals. About four years ago, the limbs of a woman were one morning found in

different parcels scattered about the Avenue d'Orléans and neighbouring thoroughfares just above the Observatory. Contrary to the London artist, "Jack the Ripper's," practice, the body had suffered no other mutilation than clean dismemberment, and the head was lacking. Otherwise the Paris police have been as unlucky as their colleagues across the Channel, the murderer—if murder it was—never being found, and the victim remaining unknown to this day. At last, all clues having failed, it was last week decided to give the headless remains a Christian burial after they had been, during four years, kept frozen stiff and unaltered at the Morgue.

A WARNING TO STUDENTS.—By order of Minister of Public Instruction Fallières, notices have been posted in all faculties, superior schools, lycées, and colleges advising young men that henceforth, according to law, "in time of peace all who have obtained, or are qualifying themselves for obtaining, the diplomas or degrees of licentiate of letters or sciences, doctor of law or medicine, pharmacist of the first class, &c., shall, after one year's actual service under the colours, and at their request, be granted a furlough until their age entitles them to belong to the reserve. Those who before they are 26 shall not have secured their diploma, or prove irregular in their attendance, shall be drafted back into the army to serve the remaining two years owed to the State." The threatening prospect of two more years' drill and bean-soup will, no doubt, be sure to fill the high schools and faculties with steady classes of exemplary students.

POTASSIUM IODIDE SOLUTIONS, Professor Berthelot thinks, will turn yellow owing to the presence of carbonic acid in the air. His experiments have shown that the change will not occur when the solutions are left for any length of time in contact with air deprived of carbonic acid. His explanation, as given at the October 14 sitting of the Academy of Sciences, is that, the combination of potassium with iodine developing about the same amount of caloric as its combination with oxygen, there is no reason why pure oxygen would displace iodine. But when any acid, even weak carbonic acid, is present, the preponderance of caloric will be on the oxygen side, and decomposition take place. Or, to leave aside the thermo-chemical theories dear to the Professor, and to use more familiar terms, the affinity of oxygen for potassium is about the same as that of iodine, but when to it the affinity of carbonic acid is superadded, some iodine will be displaced by oxygen.

MEDALS FOR "COLLABORATEURS."—A list of awards to collaborateurs—that is, to men who, not appearing as the ostensible makers of the goods exhibited, are yet entitled to a large share of the glory—has been published in the *Journal Officiel*. These are mostly Frenchmen. In the chemical sections, at all events, no collaborateur's medal goes to Great Britain. The following may be mentioned:—Gold medals: Pontier (André), organiser of the collective pharmacists' exhibit, France; Portes (with Chassaing & Cie.), France; Valencienne (with Genevoix & Cie.), France. Silver medals: Coxwell (with the Solvay Process Company), United States, and several Belgians with the same company; Frochot (with Chassaing & Cie.), France; Porthéos (with Billault), France; Ragoucy (with Duboué-Dausse & Boulanger), France. Several silver and bronze medals also go to the staff of the Pharmacie Centrale (Genevoix & Cie.), and also to the staff of MM. Billault, the chemical manufacturers.

FIGHTING THE MICROBES.—The old system of transporting in ordinary hacks patients suffering from contagious diseases, and then allowing the same vehicles, after a sort of disinfection, to transport the public as usual, has long been condemned in principle, and steps were taken some time since to establish a special ambulance service for such cases. Twelve waggons of a new style are to compose the equipment, and five of them were delivered by the contractors last Wednesday, and inspected by Dr. Chautemps, president of the Municipal Council, M. Peyron, director of the Assistance Publique, and other gentlemen connected with the hospital service. Each vehicle, costing 2,700*fr.*, contains a movable stretcher, and an elastic metallic seat for the nurse, who by means of a speaking pipe can communicate with the driver. The stretchers are articulated, and made so as to pass through narrow stairways, and carry the patient either sitting or lying down. Each waggon is to be used only for one sort of disease, and to be disinfected after each transportation. On being

asked whether the nurses would be allowed to use fragrant atomisers, Dr. Chautemps replied that to the nurse as well as to the physician a patient never smells bad.

DR. PHILIPPE RICORD, who died on Wednesday, was born on December 10, 1800, at Baltimore, Maryland. His was a French family which settled in the United States and has prospered there, the name being well represented in the middle Atlantic States. Some years since a Ricord was the Mayor of Newark, N.J. Philippe, at the age of 20, was sent to Paris to study law, but instead became enthusiastic for surgery after hearing one of Dupuytren's lectures. In 1823, having become an interne, he was assigned to the celebrated surgeon's hospital, but soon lost favour owing to a pun which has remained legendary in the Latin quarter. Dupuytren, one day at his morning clinic, said of a patient dead during night, "Il a dû mourir du delirium tremens (très-mince)." "Pas si mince" (not so thin), whispered young Philippe, "puisqu'il en est mort." The head surgeon overheard the remark and severely rebuked the punster, adding that with such dispositions Arnal's performances at the Variétés would suit him better than a surgical clinic. Ricord at once left Dupuytren's service, and it is said the two never became reconciled. In 1826 he graduated as a doctor of medicine with a thesis on "Sundry Propositions on Surgery," offering no particular interest. But just as he was going to push his way on in Paris, the loss of his father's fortune compelled him to settle in a small country town near Orléans. He left it, however, on the first occasion, he having in 1828 secured by competition the post of surgeon in the Pitié hospital. Finally, in 1831, he was appointed head surgeon to the Midi Hospital (male syphilitics), where he remained until 1860, when the age limit obliged him to retire. His contributions to medical sciences have been numerous and most important, but it is chiefly as a syphilographer that he became celebrated. He was the first to show that gonorrhoea and syphilis are distinct affections, and to clearly establish the evolution and different stages of the syphilitic infection. His principal works are on the bivalvular speculum (1833), blennorrhagia in woman (1834), monography of the chancre (1837), treatise on venereal diseases (1838-1863), blennorrhagic ophthalmia (1842), syphilisation and contagiousness of secondary stages (1853). Besides he sent many memoirs to the Academy of Medicine and contributions to the medical press. He also wrote considerable annotations for the French translation of Hunter's treatise on venereal diseases. At one time he had with English physicians quite a controversy, which occasioned his visit to England, when—the French claim—he converted his opponents to his views. Strange enough, notwithstanding his world-wide reputation, it was only in 1850 he was elected to the Academy of Medicine, and he never was given a chair at the Faculty. It was at his hospital he did his teaching before immense classes of voluntary hearers, who loved him as much for his kindness as for his wit and quaint sayings. He was decorated with all the orders of Europe and elsewhere, and scandal has it that the bestowers had personal reasons to be thankful. Ricord would only smile and say he was something like that pedicure who had eradicated corns from many crowned heads in Europe. His last appearance in public was in 1870 during the siege, when at the age of 70 he had charge of the ambulances, and behaved with such gallantry that President Thiers in 1871 made him a grand officer of the Legion of Honour.

GERMAN PHARMACEUTICAL NEWS.

(From our Berlin Correspondent.)

THE AGITATION AMONGST CHEMISTS' ASSISTANTS for a reduction of working hours has met with success at Stuttgart, where the proprietors of the various chemists' businesses have agreed to close their establishments at 9 P.M. in future. The new rule came into force on October 1.

DR. REICHARDT, who has for many years edited the *Archiv der Pharmacie*, announced some time since his intention of retiring. Arrangements have accordingly been made, and after January 1, 1890, the paper will be under the joint editorial control of Professors Schmidt and Beckurts.

FORMYL-PARA-AMIDOPHENOLETHER is another new synthetic remedy that will probably soon be met with in commerce. It is not an antipyretic, but is said to affect the spinal cord. If its claims are confirmed it may prove useful in convulsive diseases.

COMPRESSED DRUGS.—A novelty that seems likely to have a future consists of vegetable drugs and herbs, such as camomiles, peppermint, Irish moss, &c., presented in small compressed tablets of about an inch square, elegantly put up in tinfoil.

UNQUALIFIED VENDORS OF MEDICINE.—The regulation in Germany respecting the sale of medicines by unqualified persons are very stringent. A drysalter discovered this to his cost the other day. He had been in the habit of selling small blisters, and, having been four times previously punished for similar offences, he was condemned to three days imprisonment.

CODEINE.—Notwithstanding the large number of synthetic hypnotics now before the medical world, this old remedy has lately been again investigated and recommended by several authors in various diseases. Dr. Rheiner speaks very highly of it, especially as a mild narcotic in cases of phthisis, where morphia is contra-indicated. Dr. Freund gives the results of his experiments, and recommends it in certain diseases of women.

THE FORTHCOMING EDITION OF THE GERMAN PHARMACOPOEIA.—In connection with this the old argument is reopened as to the language in which it should appear. The last issue, it may be remembered, was originally published in Latin, but an edition in German was brought out at the same time. Of the chemists on the Pharmacopoeia Commission Dr. Vulpius has not sat before, Dr. Brunnengraeber has been on one previous commission, and Dr. Schacht has had the honour three times.

ANOTHER COLOUR REAGENT FOR COCAINE is announced by Dr. Greitherr in the *Pharm. Zeit.* The active agent in this process is palladium. To a few drops of cocaine solution about a drachm of chlorine water is added; on the further addition of 2 or 3 minims of palladium chloride solution a beautiful red precipitate is thrown down—slowly decomposed by water insoluble in alcohol and ether, but soluble in a solution of hyposulphite of soda. Of 73 other alkaloids treated in the same way not one gave similar reactions.

LANOLINE.—An important decision has just been given by the highest court, according to which no one is allowed to bring out any preparation of water and wool-fat except the holders of Liebreich's lanoline patents. Whether the water is rubbed in or combined in any other way does not matter as the decree states, "It is quite immaterial how the water is mixed with the lanoline. Lanoline was a most important invention, and must be protected; though combinations of wool-fat with water, the lanoline may have advantages and improvements over wool-fat without water."

ANALYTICAL EXPERTS.—A complicated case of poisoning came before one of the courts recently, in which two parents were alleged to have poisoned their two children. After two days' deliberation the accused were acquitted, as the judges could not decide that a crime had been committed owing to the different opinions of the various experts. Some of the latter thought the poisoning might have been due to arsenic, and a possible source of this was found, the walls of the rooms, before being papered, having been coated with paint containing arsenic. Professor Rossbach thought it likely that poisoning was caused by phosphorus, which the children had been taking in combination with cod-liver oil to improve their health, though he did not exclude arsenic. One analyst found phosphorus in the bodies, but it could not be proved that it had entered the stomach in a free state and was not the result of decomposition of some phosphoric acid.

RANCID OILS can be sweetened, according to Hager, by thoroughly and repeatedly shaking during twelve hours on volume of the oil with one and a quarter volume of 85-per cent. alcohol, allowing to separate and removing the upper layer. The process is not suitable for castor, cod-liver, croton, and laurel oils, and, we might add, in other cases it is cheaper to buy new oils.

THE PARIS EXHIBITION.

(TWELFTH NOTICE.)

THE world's great show is fast drawing to its close. Exhibitors are preparing for their departure. The President and Madame Carnot have had those of them who appear in the grand prize and gold medal lists at the Elysée to "trip the light fantastic toe," and there was a dreadful crush, thus showing, better than anything else, how the honours were showered three weeks ago. With the close of the Exhibition we propose to bring our reports to an end. So far we have devoted fifty pages or more to the Exhibition, and have aimed to give the cream of the collections. Still there are several groups of exhibits which it may be advantageous to refer to subsequently, as our representatives took advantage of their visit to collect some information which is not at ordinary times obtainable. In this report we propose to continue our notes on the chemical exhibits, and to call attention to

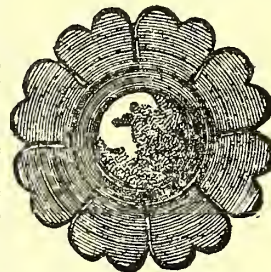
EXHIBITS OF SURGICAL APPLIANCES.

A very large proportion of the latter do not properly fall within the scope of this report. Indeed the Liberal Arts Section is so full of material in this department and in general appliances for the teaching and practice of medicine and surgery, that a week spent in it is a liberal education, and a proper report of what is to be seen would occupy our pages up till Christmas. We do not propose to do that. In the British section JOSEPH GRAY & SONS, of Sheffield, have a magnificent exhibit arranged for them by their Paris representative, Mr. Luscher. Each of the four sections of the case is devoted to a separate class of instruments, viz., dental, midwifery, veterinary, and general surgical. Electromagnetic machines are also shown. It would be difficult to overestimate the value of the work which this collection exhibits. The finish of the steel, the adaptability of the instruments for the required purposes, and the comfort of the operator all appear to be matters of appreciative study with the makers. Enemas and trusses are also shown by this firm. COUNT OSTEROG, better known as "Walery," the court photographer, has a place near by, at which he exhibits Walry's antiseptic canvas, a peculiar pine-wool intended for underclothing and chest-protectors and the like. It is perforated and has apparently been treated with Stockholm tar. Sir Morell Mackenzie speaks highly of it, and it has been used by our troops in Burmah. SEABURY & JOHNSON, of Jewin Street, E.C., have two distinct exhibits, as catalogued, and we may refer to them as (1) surgical dressings and (2) plasters. In the former hydronaphthol occupies a prominent part. The case in which it is exhibited is a handsome upright mahogany one. In the centre stands an Eiffel Tower formed of hydronaphthol pellets—a decidedly attractive feature. At the back of the case the plaster and surgical specialities which the firm make are displayed in the cases in which they come into commerce. Then at the base there are the "Seabury" sulphur candles, which are becoming quite popular, a number of medicated soaps and surgical dressings, including hydronaphthol gauze and wool. The jury showed their high appreciation of these products by awarding two silver medals, which is the highest distinction, we understand, awarded to any who have not taken part in previous exhibitions in France.

GEORGE HAYNES & Co., cotton-spinners, Stockport, have a complete and neatly-arranged selection of high-class medicated and absorbent cotton-wools. These wools are guaranteed to be thoroughly absorbent, and have every appearance of warranting this claim, being equal in most respects, and superior in many, to similar manufactures we have met elsewhere. Other specialities of this firm are their plaited wicks for night-lights, and grey and bleached plaited wicks for stearine and paraffin candles. These are exceedingly well made, while the samples of wicks for paraffin lamps, oil cooking-stoves, &c., are of a texture and uniformity of finish which in themselves are a guarantee of a high illuminating-power. This firm is one of the few

appearing on the Champ de Mars which has completed a century of useful manufacturing. Established for more than this period in London, their present mills were constructed in 1882, and are replete with modern machinery, bleaching-plant, and other appliances, besides that most necessary adjunct—a careful supervision.

In the French pharmaceutical and chemical section there are several exhibits which may fairly be classified under this heading. For instance, RIGOLLOT & CIE's mustard leaves, which are shown along with the material from which they are made (black mustard seed), and the honours which they have gained—medals by the dozen, to which the Paris jury have added a silver one. A. BESLIER, 13 Rue de Sévigné, Paris, has a splendid exhibit of plasters, including "English" court plaster and corn and bunion plasters. Ointments and cerates also figure in the case, as well as unspread plasters. Moreover, a special show of Lister's antiseptic dressings is made. This is a very creditable show; it includes some novelties, such as carbolised and salicylated jute and New Zealand flax. M. Besslier's "Appareil Compressif," for the radical cure of umbilical hernia in infants and adults, is a simple little application which we figure. It consists of a piece of strong cloth, cut in a peculiar manner, and spread with a powerful plaster. When placed on the umbilicus, if there is any tendency for peritoneal membrane to protrude, it is evident that the internal pressure only assists in making the compress draw the edges of the umbilicus more tightly together. The compresses vary in diameter from $7\frac{1}{2}$ to 25 centimètres.

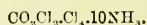


IN THE CHEMICAL COURT.

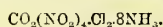
A few of the most important exhibits in this court remain to be mentioned, particularly medicinal chemicals of inorganic origin. Several exhibits touch both branches of chemistry; for example, that of BILLAULT, 22 Rue de Sorbonne, Paris. Some of the specimens which this house shows are of miraculous production. In the centre of this handsome case is a dish-shaped mass of metallic bismuth, about 20 kilos. in weight. The crystallisation and infinite variety of colour are of fairy-like beauty. At one side of this is a pillar of vitreous selenium, and at the other one of graphitoid selenium. To one who knows the stubborn resistance which iridium offers to all the resources of the metal-worker's art, it is not surprising that the firm have placed 500 grammes of it upon a blue-plush cushion! This metal is practically infusible at the highest temperature of the blast-furnace, yet Billault's specimen, which is in two ingots of 250 grammes each, is the pure element obtained by fusion. All the other rare elements in the case naturally pale before this, and we need not name them. Another feature of the collection is cyanogen compounds. There is cyanogen itself in a mass of foliated crystals, and absolute hydrocyanic acid also in the solid state; but it was the platino-cyanides which chiefly struck us, owing to the spectral fluorescence which all the crystals exhibit. The lithium platino cyanide is crimson, the sodium salt yellow, the yttrium magenta, and all not alike in form, so that the fluorescence differs, and it has a wonderful effect. The chloroplatinates are also a fine exhibit. The organic bodies shown are somewhat rarely seen, and are really typical specimens. Moreover, together with the exceptional inorganic salts, they serve to show the degree of perfection to which the house has reached in the manufacture of medicinal chemicals (antimony, bismuth, lithium, &c., salts), samples of which find room in the case. Another charming

exhibit of pure chemicals is made by **POULENE FRERES**, of 92 Rue Vieille du Temple. The largest crystals of iodoform which we have ever seen are here; they are fully 1 inch square. Quinone, hydroquinone, and alizarine compounds are numerous, and there is a group of those curious cobalt compounds which De Frey, Jörgensen, and others have studied, which are but little known and of remote chemical interest. They are compounds of cobalt chloride with ammonia—not double salts by any means, as two formulæ will show:—

Purpureo-cobaltic chloride (small black crystals)—



Croceo-cobaltic chloride (purple crystals)—



Poulene Freres rival their Parisian competitors in the matter of crystallisation. An ounce crystal of ammonium citrate is another example of their skill in this department. The iodine manufacturers of France have combined together to show their products in a single large case. There is little exceptional about the metallic and other iodides which are here, and we need only name the participants in the show, Origet & Destreichas, 10 Rue du Conservatoire, being their agents:—**H. LEVASSEUR**, Conquet (successor to F. Tissier); **CAROT & CIE.**, Ploudalmezeau; **GLAIZOT FRERES**, Aber Wrach; **DE LECLOSE TREIVGEDAL FRERES**, Audierne; **G. DERREIN**, Pont-l'Abbé; and **LEGLOAHEC FILS**, St. Pierre Quiberon. The products of the sea which these firms show are not by any means imposing. For something which really stirs up the imagination in regard to the endless stores which the ocean furnishes we must go to the exhibit made by **PECHINEY & CIE.**, of Solindres. The name of this firm is almost as familiar in this country as it is in France, owing to the work which the firm have done to carry out the brilliant ideas of the late Walter Weldon. It is they who have realised his project of making chlorine from magnesium chloride, and, therefore, of drawing our supplies of bleaching agents direct from the sea. How this is exactly done we have told our readers more than once, and it is unnecessary to repeat more now than that the process depends upon the action of steam on magnesium oxychloride. The magnesium chloride is in the first instance obtained from sea-water, hence the exhibitors' statement that they show "sel marin et produits des eaux-mères." It will suffice to say that in addition to the direct products they exhibit bleaching agents and some splendid chlorates. There is an excellent model of the plant used, and they also show aluminium manufactured by Deville's process, and a complete collection of alkali products. There is no concealing the fact that this careful of specimens is as great a nightmare to alkali makers as is that of Solvay & Cie., which stands not far from it. Professor Dewar has amply demonstrated that the Weldon-Pechiney process is workable, and it is only a question of time for it to take a firm hold. When that is done we shall have bleaching-powder produced independently of alkali, and alkali independently of bleaching-powder, so that without unnatural competition we shall have supplies of both at the true market value, and that will be lower than at present. Having mentioned alkali, it is but right that we should devote a minute to **SOLVAY & CIE.**'s case. We refer to that of the French company, whose works are situated at Dombasle-sur-Meurthe. We have very fully spoken of the enterprise of all the firms which shelter themselves under the name of Solvay, and who work the ammonia-soda process in various parts of the world. We need not return to that. The French company is one of the largest, and they give visitors to the Exhibition an idea of the extent of this operation by means of large photographs and plans of the factories. The products are shown, and, what is worse, a sample of hydrochloric acid recovered from the calcium chloride waste of the process! We ought to have mentioned, in speaking of the kelp products exhibit, that there is a much more valuable one in the same line shown by **ADOLPHE ROQUES**, 36 Rue St. Croix de la Bretonnerie, Paris. Iodine in remarkably large crystals is shown by **M. Roques**, who is a maker of camphor also. There is a very good display of this, together with models of the subliming apparatus, and a kind of crystallised camphor (the "Areb"), to which the maker gives the name "borneol du camphre du Japon."

Anyone who has spent a fair amount of time in this

chemical court cannot have failed to observe the large number of firms who are engaged in industries whose chief article of consumption is sulphur. There are the pyrites burners, sulphuric and other mineral acid makers, and manure manufacturers, none of whom show anything particularly novel, so that we shall not mention names. In addition to them there is another class—the makers of bisulphide of carbon—whom we could not have conceived to be so numerous. There is one company, for instance, who under the direction of **M. Gustave Deiss** turn out 6,000,000 kilos. of the bisulphide annually, this being for consumption in France and elsewhere. It seems to be an excellent article which these companies produce, and the contents of the cases sufficiently indicate the use to which the bisulphide is put, viz. for the extraction of the residue oil from the pressed or crushed pulps of olive and other oil-yielding bodies. But it is chiefly in olive oil making that the bisulphide finds an outlet, and already that use has made the manufacture of carbon bisulphide a very important industry in France and Italy. Another article is also shown somewhat profusely, so that we judge it to be in much commoner use in France than it is here. We refer to peroxide of hydrogen. Some of the exhibits are really pretty—for instance, that of **A. PORLIER**, of Perreux, who has some nice examples of sponges, birds, feathers, wax and ivory bleached with the peroxide. It seems to do its work very effectually. A black bird has become grey, for example, and yellow wax has been turned to a milk-white colour. Eau de Javelle is still another article which is shown by several. The exhibits of inks, boot-blackening, varnishes, fly-papers, and colours are as plentiful as they are pretty, and even disinfectants are to be seen here and there.

Personalities.

MR. GEORGE D. BEGGS, M.P.S.I., is nominated as a township commissioner for Dalkey.

MR. R. MCCREERY S. HILL, M.P.S.I., Dublin, has abandoned his intention of emigrating to Australia.

SIR HOWARD GRUBB, scientific-instrument maker, Dublin, has been elected honorary secretary of the Royal Dublin Society.

MR. BOYD has been appointed dispensary officer (*locum tenens*) to the Hillsborough district at a salary of 104*l.* per annum.

MR. JAMES ALLEN, general druggist, Bushmills, Ireland, fractured his leg last week in an attempt to jump from his trap. He is progressing favourably.

THE failure is announced of the old-established perfumery and soap works of **S. Engel** (proprietor, **S. A. Krüger**), Posen, Germany. The liabilities are estimated at over 200,000*m.*

MR. F. MARCH, chemist and druggist, of 8 Station Road, Westgate-on-Sea, has disposed of his business to **Mr. James Wyde**.

MR. C. L. STURROCK, whose departure for Australia per the s.s. *Austral* we mentioned last week, is, we understand, representing **Mr. William Toogood**, as well as Messrs. **Stevenson & Howell**.

MR. F. S. GRIMWADE, of the firm of Felton, Grimwade & Co., recently announced himself as a candidate for the representation of the Melbourne Province in the Victorian Legislative Council, vacant through the death of **Sir James Lorimer**, late Minister of Defence for the colony. We understand, however, that **Mr. Grimwade** has withdrawn his candidature for the present.

THE Liberal party in the Dartford division of Kent are looking round for a parliamentary candidate to fight the present President of the Education Department, and it is suggested that they should approach **Mr. S. M. Burroughs**, of Burroughs, Wellcome & Co., whose works have recently been transferred into the division. **Mr. Burroughs** is an American by birth, but he has just taken out letters of naturalisation.

THE BREWERS' EXHIBITION.

THE beverage-making industry seems to be in a satisfactory condition, for the annual autumnal show at Islington this week is larger than ever, and no congress meetings are to be held in connection with it, "there being a lack of subjects of any great moment to brewers and the trade generally." The other characteristics of these exhibitions are, however, represented in undiminished splendour. A brewers' exhibition differs markedly from all others. "What will you have?" is the prelude to business; should you decline you are offered a good Havana, failing that you may help yourself to a Huntley & Palmer's biscuit, and the man who declines *all* was not born to do a brewers' exhibition. Nevertheless the leading feature of this year's exhibition was a ginger-ale and non-excisable herb or botanic beer competition for a silver medal, a bronze medal, and certificates of merit. There were 55 competitors in the ginger-ale class, and 34 in the other, and they were all *bona-fide* manufacturers of the drinks. The judges were:—W. Bratby, Esq., J.P. (Messrs. Bratby & Hinchliffe), Colonel Frederick Foster, M.I.M.E. (Messrs. Barnett & Foster), and Professor V. B. Lewis, of the Royal Naval College, Greenwich, and another. The result of the competition was decided on Monday evening; our representative was so early on the spot that the surnames of the winners were only known, which accounts for the somewhat curt manner in which we give them. The successful competitors in

THE GINGER-ALE COMPETITION

were those who had adopted the following *noms-de-guerre*:—

First.—"Celebrated" (Shelvey, Brighton).

Second.—"Merit" (Tunbridge, Reading).

Third.—"Rival" (Hinds, Coventry).

Fourth.—"Royal" (Longbottom, Driffield).

Fifth.—"Buonaventure" (Kent Mineral-water Company, Lewisham).

Sixth.—"Gem" (Legg, Ilminster).

We may say that the samples in this instance were sent in on August 1, and that the winners of the silver medals in the last three years' competitions were not allowed to compete. The judges took into account (1) appearance in bottle, (2) opening outburst, (3) taste and bouquet, (4) effervescence, and (5) foam head. 340 marks was the highest possible number.

THE BOTANIC BEVERAGES

were judged on similar lines, and the awards were as follows:—

First.—"Excel" (Lacworth, Acton).

Second.—"Wellington" (Gadd, West Bromwich).

Third.—"Ret. Lown" (Tomlinson, Bradford).

Fourth.—"Acme 1" (Wood, Aldershot).

Fifth.—"The Portland" (Taylor, Attercliff).

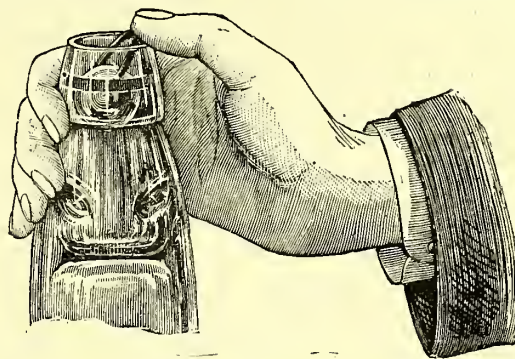
Our representative asked the secretary if he was satisfied with the competition. "Yes," was the reply; "it has been very good this year. The exhibition, as a whole, is a great success this year. It is larger, is well attended, and the public appears to take a greater interest in it."

We may explain that much of the increase is in departments which this journal does not touch—viz. such things as drays and other carriages, malting and brewing machinery, and a new section promoted by a class journal devoted to the hotel and restaurant trade. The latter occupies the gallery of the hall. In

SODA-WATER MACHINERY

the exhibits are similar to what they used to be. BARNETT & FOSTER occupy their usual space at the east end of the hall with a splendid assortment of apparatus and articles which cover all the requirements of the soda-water business. For example, they have a good selection of syphons and bottles. The former they now supply at 1s. 6d. a syphon, and it is surprising how good an article they are able to turn out at this figure. In bottles the most interesting specimen is the new "attached opener" which is shown in the figure. This is a modification of Mr. Foster's trigger opener, with the superior advantage that it can be attached to any Codd's bottle. It is simply a wire V inserted in the

internal indiarubber ring, as shown in the figure. Most of the machinery is in operation without interruption, so that there is always an admiring crowd around the exhibit. We



were impressed with the magnificent proportions and facile working of a double "Niagara" machine, and the recently improved automatic generator, which controls the admission of chalk and acid by an ingenious exercise of the internal gas-pressure, is well worthy of mention here. An additional advantage which this generator possesses is its power to discharge the spent materials. BRATBY & HINCHLIFFE are situated on an adjoining stand, their machinery also being in motion. We could not help noticing the satisfactory manner in which the "Lightning" bottle-washer now works. The brush of this machine is a V-shaped piece of rubber, inserted in a spring fork, which goes into the bottle, and, along with a jet of water, effects a thorough cleansing of the glass. The latest introductions of this firm are two machines patented by Mr. Chevasse. One is a steam-power turnover filling machine, a most ingenious invention consisting of a quadruple filler moving on a turntable. Suppose the attendant places a bottle on one of the fillers and the turntable moves, as soon as that is so the arm inverts the bottle, and by the time that the table has described a circle the bottle has been filled, reverted, and the moment it comes to the front again it is discharged from the machine, and there is time to replace it with another. Four bottles are of course filled simultaneously. Mr. Chevasse's other invention is an automatic gas-generator, and in addition to it the firm exhibit a good assortment of their well-known mechanical specialities, bottles, and aerated-water materials. A soda-water machine on a somewhat novel principle is exhibited by A. LOZE & Co., of Liverpool. This is a generator, carbonator, and filler in one, and does not require an engine to work it; a chemist could, in fact, place one in his back shop, and it would not create disturbance. It consists of three cylinders with swivel attachment. The central one is the generator, which is in two parts; the lower is filled with dilute sulphuric acid; to the holder of the upper part an oblong perforated box, tightly packed with bicarbonate of soda, is attached. The head is then bolted down, the side cylinders, or carbonators, are nearly filled with water, charged with syrup if required, one or both of these being connected with the generator, soda box is their lowered into the acid, the residual air in the carbonators is allowed to escape, and as the carbonic acid gas mixes with the water, the carbonator may be turned round so as to thoroughly agitate the contents. Syphons and bottles may be filled simultaneously, the devices whereby this is possible being perfectly simple. This firm also show a new-shaped wire which is decidedly clever, though simple. GUERET FRÈRES, of Paris, show through their agents, Merchant & Co., Southport, some rather pretty machinery and syphons. Mr. E. GERAUT, of Farringdon Road, has a good exhibit of syphons and gazogenes, with a syphon-filler. DAN RYLANDS (LIMITED) again occupy an extensive space with machinery in motion, and throughout the hall there are half-a-dozen other exhibitors in this class. We may mention, for instance, Messrs. FAVARGER & Co., who are placed in the gallery. Their exhibit consists of soda-water machinery, and a splendid assortment of syphons and seltzogenes. There was a good deal of interest excited in the early part of the week by Messrs. FARROW & JACKSON's exhibit of liquefied carbonic-acid gas as applied to the aëration of water. They have devised a

very simple "generating plant" for this. The liquefied gas (which comes from the Rhine district) is connected with a tinned copper cylinder nearly full of water; this is placed on a rocking-stand, so that the water becomes quickly carbonated. The cylinder when ready is removed, and may be attached to a pillar counter-fountain, from which the water is drawn off into a bottle in a similar way to lager beer. There are a great many bottle-washing machines in the exhibition, but we have only space to mention one (Burgess's patent), shown in conjunction with Andrew & Co.'s (Limited) engines. This machine is on the wheel principle, and is perfectly automatic, as it soaks, brushes (in and out), rinses, and delivers the bottles by mechanical power. It would take up too much space to describe it in detail, but we may say that it can wash 150 dozen bottles an hour with the assistance of three boys. It would take eleven smart bottle-washers to do as much. Just at this spot there is an exhibit which we could not help taking an interest in. There is a small dynamo by Mr. Ronald A. Scott capable of supplying without accumulators, seventeen 16-c.p. lamps, and it is worked by a small 1-h.p. Atkinson's "Cycle" gas-engine. The machines work smoothly and noiselessly; the light is steady and brilliant, and we calculate that the complete installation, including lamps, could be put down at 110/.

AERATED-WATER MATERIALS.

The exhibits in this class equal in number those of last year, and it struck us that even greater taste has been displayed on this occasion in showing the articles. W. J. BUSH & Co. have again placed their booth in the centre of the hall. On the outside of it their chief specialities in the essence line are displayed in handsome gold-labelled vases; and in the interior, essential oils, compound and fruit essences, and other articles with which the name of the firm is associated by long reputation, are displayed. A junior partner of the firm told our representative that Mr. Woolley and he, with their assistants, had been kept very busy during the Exhibition. "These are good times," he said, "for doing business, and we take full advantage of them." The leading specialities, such as soluble ginger and lemon, their favourite brands of oils, and the French cream gum extract, bulk up largely in the orders, but there is one new thing—"Hot Toddy"—which they are having a "run" on. "It combines the flavour of 'Hot Tom' with the soothing influence of 'Scotch Toddy,'" was the quaint remark upon it; and really it is a decided improvement upon the former, while temperance drinkers may persuade themselves that it is better than the latter. STEVENSON & HOWELL carried us in imagination to the tropics with the first novelty which they brought under our notice. This was the P. and O. bitters—a most appetising and fruity drink, which is bound to "go" wherever it is introduced to good customers. They supply attractive labels with the essence. We were shown also a soluble essence made from green ginger—a powerful product (1 oz. to the gallon)—which makes a refreshing ale. A comment on the "head" on the latter brought out the remark from Mr. Howell that the ale contained a little of his firm's American foam syrup. By "a little" he meant a single drop, which is sufficient to give a lasting and creamy head to a split-bottleful. Apart from this firm's chief articles ("extra quality" ginger essence, and other ginger products, lemon, &c.), there are outside their stand some dozens of different kinds of flavours, and inside we observed a new series of culinary essences, and the oils from which they are made. One of these (celery) they have had to distil specially, and, somewhat curiously, they have had a demand for it which they did not anticipate. These brief notes give but a slight indication of the interesting character of the exhibit. HASSALL & Co., York Road, N., do not pretend to show anything novel at these exhibitions; indeed, it is rather the opposite with them. We renewed our acquaintance with the bottles of lemonade (made with phospho-citric acid) which we have inspected annually since 1884, and still we find that it is as bright as ever—*ergo*, the phospho-citric is a thing to trust in. There is a very handsome stall (No. 43) devoted to the manufactures of DUCKWORTH & Co., Manchester, a young firm whose reputation at home and in the colonies is steadily growing. They appear to be imbued with the proper enterprising spirit, and make a most artistic display of their products. There is a wonderful variety of

these, but we need only instance the superior quality of their Premier ginger-ale extract, Jubilee champagne, and soluble essence of lemon, all of which are calculated to make trade for those who use them. Mr. C. W. Field, of Liverpool, comes out very handsomely this year. His latest thing is a nice hop aroma. Another young Manchester firm (Fitzsimmons & Fearnley) also exhibit, this being their first time. Here, again, we meet with ginger-ale extract as the speciality. It is rather a remarkable thing that makers of ginger-ale extract take the Belfast ales as the standard to work up to. Has anyone tried to beat this and succeeded?

MISCELLANEOUS EXHIBITS.

The "Cattley Abbey" Natural Seltzer Water Company, of Sleaford, again show their excellent water, which we are glad to hear is progressing rapidly in favour with the public. The meat-beverage manufacturers are in force. The BOVRIL COMPANY (LIMITED) make rather a novel venture in the gallery—viz. a tasting-stall constructed of Bovril bottles, and of the exact shape of one of the bottles. Can we forgive them for stating on the neck of the giant container, "Shake the bottle," &c.? BRAND & Co. are at No. 126 stall, on the ground floor, with a selection of their meat preparations, which have taken such distinguished rewards at the Paris Exhibition. They are not far from GRIDLEY & Co.'s exhibit of isinglass, which is the best of a number of that character in the Exhibition. They have an outside case containing a selected assortment of samples, and inside a collection of isinglass for brewers' use, including a special strip of light colour, 7 lbs. of which make over 100 gallons of reliable finings. They have also on show fair Russian isinglass, and a cheap substitute, "Isinglassine," which is as like fine-cut isinglass as anything could be. There are several exhibits of water-filters on the ground floor, the Silicated Carbon Company's manufactures being amongst them. Mr. R. W. ANDREWS shows filter-bags. These are used very extensively by brewers, but the smaller sizes deserve to be better known to druggists. The filtering-bag is made of a specially-woven seamless cloth, and is placed inside a strong sheath of cord netting. As this sheath is only one-third the size of the filtering-bag great pressure is exerted upon the bag when it is filled, so that filtration is very rapid, no matter how dense the liquid may be. For concentrated infusions and syrups there is no other filtering-bag so satisfactory as this. Edwards's Desiccated Soup may be sampled on the ground floor. In the gallery there are a number of exhibits which are worthy of inspection. We name a few briefly. W. F. HUNT & Co. show paper manufactures, in which their pleated bottle-cap principle is carried out. It is surprising how well they have done this business. Mr. J. SHOREY, 57 Farringdon Road, exhibits Peterman's cockroach and beetle food, a non-poisonous exterminator, which threatens to free London of these pests. He also shows a new silver-lined steel seltzogene, which "a Star man" describes as "a new process by which excellent soda can be produced at the rate of 1d. per dozen." Close to this CLARK'S SYPHON GAS HEATING STOVES warm the atmosphere. Mr. Clark is to bring out a new druggists' stove shortly. He proposes to utilise the heat for making ointments and boiling water. We noticed some new ideas in bottle-wrappers and folding boxes on Mr. J. Denton's stand. B. NOAKES & Co. are also in evidence with their tinplate goods. Beside them G. VOGT & Co. perfume the air with Bulgarian rose products and the scents of Southern France. We inspected a number of fruit essences at their stand, and they seem to do well in kindred products. "Petal dust" (one of the most useful sachets we have), and a number of rich perfumes, are shown by the ROSMARINE MANUFACTURING COMPANY. We have said little about the bottle exhibits, for there is little that is novel to speak of. The same applies to screw-stoppers and capsules, all of which we have previously commented upon. BARRETT & ELSERS (LIMITED) maintain their position in this department. They now have some very neat stoppers for medicine bottles, which would be a real advantage in many cases. We may say, in concluding, that the Exhibition closes on Saturday, October 26, and that it is open until 10 o'clock in the evening.

If you can get no tannic acid as snuff for a prolonged bleeding of the nose, snuff up the dust of tea.

Legal Reports.

PROSECUTION UNDER THE PHARMACY ACT.

At the Southampton County Court, on Tuesday last, October 22, before his honour Judge Leonard, the Pharmaceutical Society of Great Britain brought an action to recover from Charles Tyrell, the proprietor of St. Luke's Drug Stores, Bevois Valley, five penalties of 5*l.* each for selling poisons, including arsenic, chloroform, laudanum, belladonna, and prussic acid, contrary to the Act. Mr. Flux, solicitor, of London, appeared for plaintiffs, and said the action was brought under Section 15 of the Pharmacy Act, which provided for the recovery of penalties for an infringement of the statute. The claim was in respect of five penalties for keeping open a shop for the retail, dispensing, or compounding of poisons.

Thomas William Stroud, clerk to plaintiffs' solicitors, deposed to handing in a prescription, on September 17, at the shop styled the "St. Luke's Drug Stores." He was served with a mixture which contained arsenic and chloroform. On the 21st instant he bought two pennyworth each of opodeldoc and laudanum.

Mr. Bell, solicitor, Southampton, who appeared for defendant, said he would admit all five purchases.

Witness continued that in each instance he was served by defendant himself. He noticed the name of Moffat & Co. over the shop.

Mr. Bunday, rate collector, said that the premises were rated to Charles Tyrell, as occupier.

Mr. Flux called the defendant, and asked him whether a letter produced was in Mr. Moffat's handwriting or not. Witness said it was, and Mr. Flux asked him to read it to the Court.

Mr. Bell objected to such a course, as the letter was from one person to another, neither of whom were parties to the action, and how could that affect the defendant?

Mr. Flux stated that he would hand in the letter to the Court, but Mr. Bell objected to even this being done. Mr. Flux remarked that it explained the title over the shop.

In reply to further questions, the defendant said that Mr. Moffat was a pharmaceutical chemist, and witness was a partner in the business.

His Honour asked witness whether he was a qualified chemist. Witness replied in the negative.

Mr. Bell stated that there was no necessity in case of a partnership.

Mr. Flux quoted the case of the Pharmaceutical Society *v.* Wright, showing that a partnership could not give a qualification to an unqualified partner.

His Honour said defendant was liable if he sold the drugs while not qualified within the Act. Having regard to the spirit of the Act, he had very little doubt about it; but, taking into consideration the points raised, he would reserve his judgment until the next court day, but Mr. Flux need not come down from London again.

Mr. Flux asked that in the event of judgment being given in favour of the Society, the costs allowed might include those of a qualified person, who, though he had not been called, was present in court to prove the analyses. His Honour assented to this application.

BUYING A CHEMICAL SECRET.

On Wednesday, in the Lord Mayor's Court, the case of "*Herzog v. Bonné*" was tried before the Assistant Judge (Mr. Roxburgh) and a jury. The plaintiff, Mr. Conrad Herzog, a mechanical engineer, of 11 Queen Victoria Street, sued the defendant, Mr. C. Bonné, a patent agent, of Eastcheap, to recover 50*l.* which he had paid as the price of a certain process, alleged by the defendant to be secret, for solidifying and reliquefying gasoline.

Mr. Lewis Glyn was counsel for the plaintiff, and Mr. P. Rose-Innes for the defendant.

The case was brought on the equity side of the court, the plaintiff praying in the bill of complaint that the contract should be annulled, and the money which was paid under it returned. The plaintiff said that on January 17 last he had an interview with the defendant, who had this process in his hands. After some negotiations plaintiff bought the secret

for 50*l.*, giving his word of honour that he would not disclose it to anyone else. Plaintiff endeavoured to find out all he could about petroleum and gasoline, and in the course of his researches he came across a work entitled "Report on the Production and Technological Uses of Petroleum and its Products," by F. S. Peckham, published in Washington, U.S.A., in 1885. In this work plaintiff was astonished to find a receipt for the very same process, in the very same manner, with the exception that "saponaria" was used instead of "bois de Panama." But as a matter of fact these substances were precisely the same; therefore, when the plaintiff found that the so-called secret was no secret at all, he applied to the defendant for the return of the money. He said that he would look into it; but he had done nothing, and hence he had to bring this suit. Saponaria bark was not the same thing as saponaria root, but they were used for the same purposes. If the root was asked for at a chemist's the bark would be supplied, because the root was so expensive. He had bought samples from Corbyn's, and Allen & Hanburys, and also from a French chemist named Jozeau, in the Haymarket, and the samples were all alike. It was not true that bois de Panama and saponaria were different substances.

Mr. W. H. Woolf, manager to Messrs. Jenkin & Phillips, drug brokers, of 21 Mincing Lane, said that he was well acquainted with saponaria or bois de Panama. Commercially they were known as soap bark, quillaia bark, and bois de Panama. Those three names all referred to the same article—those produced by the plaintiff.

Mr. Thomas Christy, a druggist, of 25 Lime Street, said that there was no difference between saponaria and bois de Panama. The latter was the name for the bark in France, while in England it was called saponaria. He had all kinds of specimens of saponaria at his office—the leaves, the bark, and fruit. Saponaria was a common drug. It was used for many purposes—amongst others, for fortifying ginger-beer.

That was the case for the plaintiff, and Mr. Rose-Innes submitted that there was no case to go to the jury. In order to succeed in an equity case, and obtain a revocation of a contract, a plaintiff must show fraudulent misrepresentation on the part of the defendant.

The learned Judge said that in the bill none was alleged, and therefore it was not necessary to prove any.

The defence, as spoken to by the defendant and M. Hervé, a French chemist, from whom the defendant bought the process, was that bois de Panama, the drug used in the process sold, was a different article to saponaria root, and that, therefore, the process was a new one and a secret one.

The jury found for the plaintiff, being of opinion that the process was not a secret one, and that the plaintiff paid the 50*l.* on the understanding that it was secret.

On these findings the learned Judge directed the contract for the purchase to be rescinded, and the defendant to return the 50*l.* with costs.

BANKRUPTCY REPORTS.

Re B. THOMAS, Medical Hall, Llanstephan, Chemist.

At the Carmarthen County Court, on October 15, before Judge Betteridge, Mr. H. B. White applied for the discharge of this bankrupt. After hearing the report of the Official Receiver, his Honour suspended the discharge for six months.

Re ROBERT MITCHESON, Spennymoor, Durham, Chemist, &c.

THE estate of this debtor has realised 20*s.* in the pound and interest from the day of the bankruptcy. The dividend will be paid by the Official Receiver, M. J. A. Longden, Sunderland and Durham, next week.

Re WILLIAM KELSEY, Town End, Barnsley, Chemist and Patent-medicine Vendor.

THIS debtor came up for his public examination at the Barnsley Bankruptcy Court, before his Honour Judge Bedwell, on October 18. In answer to the Official Receiver, the debtor said he began business in 1880 without any capital,

and had kept a day-book, ledger, and cash-book; the latter, although not properly made up, showing his receipts and payments in full. He filed his petition on August 7, having found out shortly before that he could go on no longer. Examined by Mr. Maddison, who appeared on the debtor's behalf, he said he bought the business as a going concern, and if he had been able to sell it at the same price as he bought it he should not now have been insolvent. His Honour declared the examination closed.

Re H. J. HILLIER, 79 Praed Street and 308 Edgware Road, Manufacturer of the "Oil of Sahara."

THIS bankrupt, who has traded as "J. Bellerie & Co." and as the "Oil of Sahara Company," had a receiving order made against his estate on September 25 last, and has now filed accounts showing liabilities amounting to 316*l.* 18*s.* 11*d.*, and assets *nil*. It appears that he was formerly connected with the dramatic profession; that in May, 1888, he invented a medical oil, for which he obtained a patent, and in the following July, having then a capital of 150*l.*, he commenced business as above; that he traded until May, 1889, since which date he has been without occupation. He attributes his insolvency to a loss of 200*l.* upon the trading, also to a loss of 15*l.* and a liability of 101*l.* in respect of betting transactions. The Official Receiver reports that the bankrupt has only produced a day-book containing a few entries, and consequently the affairs and deficiency are only approximately explained. The first meeting of creditors is called for October 25, at noon, and the bankrupt's public examination is set down for hearing at a sitting of the London Bankruptcy Court, to be held on November 14 next.

Gazette.

PARTNERSHIPS DISSOLVED.

Grindley & Co., Upper North Street, Poplar, chemical manufacturers.
Salamon, I. G., and Cheesman, G. E., under the style of Thomas Scott & Co., Abbey Street, Bermondsey, distillers and cordial manufacturers.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDERS.

Leighton, Sarah Jane, Durham, chemist and druggist, surviving executrix and trustee of J. H. Leighton, late of the city of Durham, chemist and druggist, deceased.

Stone, Edwin Charles, Snow's Fields and Guy's Place, Bermondsey, and Tooley Street, Southwark, drysalter and sundryman.

FIRST MEETING AND PUBLIC EXAMINATION.

Smith, Nathan, Ayr, chemist and dentist—Nov. 2, 1 St. Aldate's, Oxford; Nov. 4, 25 Walton Street, Aylesbury.

ADJUDICATIONS

Garlike, Edward William Bennett, Ipswich, surgeon.

Leighton, Sarah Jane, Durham, chemist and druggist, surviving executrix and trustee of J. H. Leighton, late of Durham, chemist and druggist, deceased.

NOTICES OF DIVIDENDS.

Clarke, Henry Berger, late of Great Tower Street, now of Mincing Lane, City, chemical merchant—first and final div. of 3*½d.*, any day, Chief Official Receiver's offices, 33 Carey Street, Lincoln's Inn.

Haffenden, James, Reading, chemist—first and final div. of 6*½d.*, Oct. 21, 119 Victoria Street, Westminster, S.W.

Jeffreys, Thomas, Glynneath, mineral-water manufacturer—first and final div. of 10*d.*, Oct. 22, Official Receiver's offices, Swansea.

Mitcheson, Robert, Spennymoor, chemist and grocer—first and final div. of 20*s.* and interest, any day, Official Receiver's office, Sunderland.

Powell, David, Swansea, chemist and druggist—first and final div. of 2*s.* 5*d.*, Oct. 30, Official Receiver's offices, Swansea.

APPLICATION FOR DEBTOR'S DISCHARGE.

Waller, Walter Kerr, Penzance, chemist and druggist—Nov. 14, Town Hall, Truro.

SCOTCH SEQUESTRATION.

ownsends, R. and A. W., Glasgow, chemical manufacturers, &c.—Oct. 22, at 12 Faculty of Procurators' Hall, Glasgow.

EXTRACT FROM THE REGISTER OF DEEDS OF ARRANGEMENT.

The following deeds of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1887. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act, making any of these arrangements binding upon dissenting creditors.

Brown, Joseph, & Co. (trading as Joseph Brown), Lower Antley Street and 304 Blackburn Road, Accrington, manufacturing chemist. Trustee: James Henry Heap, Accrington. Date, October 16; filed, October 17; unsecured liabilities, 1,337*l.* 18*s.* 4*d.*; estimated net assets, 482*l.* 9*s.* 0*d.*. Agreement to accept composition of 5*s.* in the pound, payable 1*s.* 6*d.* on December 16; 1*s.* 6*d.* on February 17, 1890; and 2*s.* on April 16, 1890. The last instalment secured.

	£	s.	d.
Atkin, Thomas, & Co., Liverpool	462	10	10
Baron, Peters & Co., Accrington	31	2	7
Blythe, Wm., & Co., Church	27	3	7
Brakes, Samson, near Bradford	12	12	0
Brown, J. H., Church	12	0	0
Brown, J. S. (Exors. of), Church	25	0	0
Brown, Mrs., Accrington	276	0	0
Dawson, Daniel, & Bros, Huddersfield	30	5	7
Dawson, John, near Huddersfield	18	2	6
Fairclough, James, & Sons, near Manchester	21	16	1
Haworth, Jno., & Co., Church	16	1	8
Holliday, Read & Sons, Huddersfield	46	0	4
Milnes, E. D., & Bros., near Bury	25	4	3
Mollin, Jas., & Son, Bradford	31	11	8
Riley, John, & Sons, Hapton	30	19	1
Sanson, W. D., Clayton-le-Moors	200	0	0
Union Bank of Manchester, Accrington	12	19	2

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

BECK—MOXON.—On October 23, at St. John's Church, Ealing Dene, by the Rev. W. Summerhayes, William R. Beck, chemist, Buxton, to Susan Grace, fourth daughter of the late T. Moxon, chemist, Liverpool.

MCGLASHAN—MCMILLAN.—On October 21, in Queen's Hotel, Girvan, Mr. Duncan McGlashan, chemist, Edinburgh, to Maggie, elder daughter of Mr. Alexander McMillan, Shalloch Mills, Girvan, Ayrshire.

DEATHS.

BAKER.—On October 11, at Cosham, Hants, Anne Martell, wife of Mr. T. B. Baker, chemist and druggist and dental surgeon. Aged 63.

BUTLAND.—On October 13, at Totnes, Mary, the beloved wife of Mr. Charles Butland, chemist, late of Exeter. Aged 75.

CARRINGTON.—On October 17, Mr. Levi Carrington, chemist and druggist, of Brimington, Derbyshire, after a short and painful illness. The deceased gentleman had only just completed his new premises at Brimington.

LUTZ.—On October 8, Mr. Louis Lutz, head of the New York drug and dyestuff firm of Lutz & Movijs, expired at his residence, 52 West Fifty-eighth Street, New York, in consequence of an accident. According to the *Oil, Paint, and Drug Reporter* the deceased gentleman had partaken of breakfast in his room as usual, and was expected to depart for business in a few moments, when the members of the household were alarmed to see him falling from a second storey rear window on to the stone pavement below, where he was found with life almost extinct. Mr. Lutz had suffered from Bright's disease and heart failure, and it is supposed that a fainting spell came over him while raising the window, and that he accidentally fell out, with the result stated. Mr. Lutz was 51 years of age, and had come to New York, from Germany, when a young man, to engage in the dyestuffs

trade. His speciality was aniline dyes, and with the assistance of Mr. Carl Rumpff, who died in Berlin last July, he built up a prosperous trade as importer in that line and chemicals. About fifteen years ago the firm of Rumpff & Lutz was dissolved, when Mr. Joseph Movius became a partner, and the style of the firm then adopted has since remained.

MARSDEN.—On October 17, Mr. J. B. Marsden, chemist and druggist, 50 Blanket Row, Hull, aged 48. Mr. Marsden was a member of the Hull Board of Guardians, and was also deputy-chairman of the Asylum Committee.

ROSS.—On October 19, at 10 Reslin Terrace, Aberdeen, Andrew Ross, chemist, 43 Castle Street. Aged 55. Mr. Ross served his apprenticeship with Mr. Williamson, chemist, Union Street, to whom he subsequently acted as assistant, and after a time he was in the employment of Mr. Forsyth, Castle Street. He commenced business on his own account some twenty years ago. He took a great interest in the Chemists' and Druggists' Association, and was most zealous in promoting the welfare of the young men who learned their profession under him. He was an elder of the Gilcomston Free Church.

WOOLLEY.—We regret to announce the sudden death of Mr. Harold Woolley, a partner in the well-known firm of Messrs. Jas. Woolley, Sons & Co., wholesale druggists and manufacturing pharmaceutical chemists, Manchester. The circumstances under which death took place were somewhat extraordinary. On Tuesday afternoon of last week a stone bottle, filled with nitric acid, was found broken in the cellar of the firm's shop in Market Street, Manchester. Whether the bottle was accidentally broken, or whether it burst without anybody coming into contact with it, is not known, but the latter is regarded as probable. When the broken bottle was found the men began to pour water on its contents, which were running over the floor. Hearing of what had happened, Mr. Harold Woolley went from the shop into the cellar, which he found full of the noxious fumes of the acid. On returning to the shop he showed no indication of illness, and made no complaint beyond saying that he felt a little sore about the chest. He left at his usual hour for his house at Crumpsall, a township on the outskirts of Manchester, remarking, as he went, that he would not return that night, as he had to attend a committee meeting of the Manchester Pharmaceutical Association. Soon after reaching home he complained of feeling unwell, and Mr. Walmsley, surgeon, was sent for. Mr. Walmsley continued in attendance, but Mr. Woolley's condition gradually became more serious, and he died on Wednesday afternoon at half-past five o'clock. An inquest on the body was held on Friday of last week, when the facts narrated were brought out in evidence. Dr. Walmsley attributed death to rapid congestion and inflammation of the lungs, produced by the inhalation of nitric-acid fumes. The jury returned a verdict in accordance with the medical testimony, and passed a vote of sympathy with the relatives of the deceased gentleman. The late Mr. Woolley studied chemistry at the Owens College under Professor (now Sir Henry) Roscoe, and he completed his pharmaceutical education at the School of Pharmacy in Bloomsbury Square, and passed the Minor and Major examinations. When he had completed his education he joined the firm of James Woolley, Sons & Co., and for several years he was manager of the scientific-apparatus and surgical-instrument department. He was a member of the Manchester Pharmaceutical Association, and a fairly regular attendant at its meetings, the last he attended being that reported last week, held seven days before his death. Apart from his connection with pharmaceutical chemistry, Mr. Woolley was known amongst his friends as a musician of considerable ability and as a member of the Masonic brotherhood. He was 38 years of age. The funeral took place on Saturday at St. Margaret's Church, Rooden Lane. There was a large gathering of the relatives and friends of the deceased, including several representatives of wholesale drug houses, and members of musical and masonic associations with which Mr. Woolley was connected, and fully sixty of the employés of the firm. The coffin was covered with floral offerings from friends, including a wreath from the "Integrity" lodge of Freemasons, a wreath from the "Companions of the Derby Chapter," and a beautiful anchor from the employés of the firm.

Trade Notes.

THE *Financial News* says that Beecham's pills, as well as Pears's soap, is expected to appear soon in stock-company form.

THE wholesale drug and medicinal herb firm of G. Coutela & Cie., 43 Rue des Francs-Bourgeois, Paris, has been made into a company with a capital of 400,000 francs.

MESSRS. HEARON, SQUIRE & FRANCIS have secured new premises at 38 Southwark Street. They are fitting them up entirely new, and expect to occupy them in the course of a month.

THE firm of J. Maubert fils & Vimard, of Vallauris (Alpes Maritimes), and 9 Rue Mazagran, Paris, essential-oil distillers, has been reconstituted for the period of two years and nine months, with a capital of 630,000 francs.

BOUILLON FLEET (LIMITED) has declared an interim dividend at the rate of 8 per cent. per annum for the six months ended September 30, this being the maximum interim dividend to be declared by the articles of association.

MESSRS. F. DARTON & Co., 45 St. John Street, have just published a new and handsomely illustrated catalogue and price-list of electric batteries, bells, magnetic machines, and field-glasses.

WE understand that the Kennedy Company (Limited) has with its property passed into new hands, and that in future the business will be energetically conducted at 2 Falcon Street, E.C., to which it has been removed from Southampton Row.

QUININE BITTERS MANUFACTURING COMPANY (LIMITED).—At a meeting of the directors of the above company, held on October 16, an interim dividend at the rate of 10 per cent. per annum for the half-year ended September 30 was declared, payable on October 23.

DAN RYLANDS & Co. (LIMITED).—The capital of this company is to be increased by the creation of 5,000 new preference shares of 5*l.* each, to be issued at a premium of 1*l.* per share; also 2,000 ordinary shares of 5*l.* each, to be issued at a premium of 5*l.* per share.

THE Marquis of Salisbury, as Foreign Secretary, has adopted a suggestion made to him by a commercial journal that British consuls abroad should be instructed to send home a summary of the regulations in force affecting commercial travellers in the countries to which they are accredited.

A BEAUTIFULLY-PRODUCED "PORTFOLIO," containing a considerable amount of useful pharmaceutical information, including the articles on "Tinctures" contributed to this journal by Mr. F. W. Fletcher, F.C.S., at the beginning of the year, is being presented to the trade by Messrs. Fletcher, Fletcher & Stevenson, of the North London Chemical Works, Holloway.

IN order to promote the popularity of their valuable antiseptic hydronaphthol, Messrs. Seabury & Johnson are bringing it forward in various solutions and other forms. For washing wounds, &c., the surgical solution is appropriate, and this is put up in such a way that the cap of the bottle is a measure for the solution, while a metal case into which the bottle fits holds half a pint of water, to which the solution has to be added. A dental solution to make an antiseptic mouth-wash is also made; tablets, an oil, hypodermic solution, a glycerite, and a dusting-powder. Cotton-gauze lint and dressings are also supplied hydronaphtholated.

MESSRS. BURROUGHS, WELLCOME & Co. have forwarded to us samples of Fairchild's pepsin in scales and powder. This is a brand of the digestive ferment which is well known to chemists. Being soluble it is of great service to them in making liquid pepsin preparations, as the period of maceration generally required with dried stomach-scrappings is unnecessary. Further, the pepsin is thoroughly active. Another sample which they send us consists of pepsin tabloids, each containing 1 grain of pepsin, with a trace of acid and aromatics, and coated with sugar. These are an admirable form for the administration of pepsin, and we should think that they would become popular without much effort.

REGISTERED **"SANITAS"** TRADE MARK.

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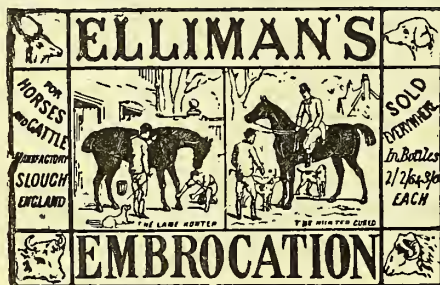
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The APOLLINARIS COMPANY (LIMITED), London, beg to announce that, as numerous Aperient Waters are offered to the public with marks, names, and designations very similar to those which are used for the HUNGARIAN APERIENT WATER so long imported by them, they have now adopted an additional Label of their own, comprising their REGISTERED TRADE MARK OF SELECTION, which consists of

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EDITORIAL NOTES.

ASSOCIATIONS OF CHEMISTS.

WE doubt whether any but one other class, trade, or profession in this country makes such a show of association on paper as chemists and druggists. It must be admitted that the doctors beat us in numbers as well as in effectiveness. Besides their nineteen corporations authorised to confer diplomas and their influential scientific societies, they have one great organisation with ramifications right through the kingdom and beyond. The men who work this engine have got it so well in hand, or understand it so perfectly, that

they can touch a button or pull a wire and the voice of the medical profession bursts forth with a Wagner-like peal of harmony. The harmony, indeed, is so exact that it is calculated to defeat its own object. Simple people, whose experience of medical practitioners has not led them to expect much concord from them, fail to comprehend the almost unanimous union manifested; and the natural tendency is to conclude that the faculty are aiming to get something out of the public treasury which does not rightly belong to them.

However this may be, it is certain that chemists have never yet found it possible to act together to anything like the same extent. From Jacob Bell's days onwards imaginative pharmacists have pictured to themselves what might be if only the whole body could be induced to pull together. But the happy thought has not yet been struck which has been able to weld the body pharmaceutic into a community with one voice. Nor is it likely to be generated. But it cannot be urged that the different sections of the trade have not had sufficient opportunity for expressing their opinions. Not counting the dead ones, there cannot be less than forty associations of chemists and druggists in the United Kingdom, some vigorous, others moribund, these crippled, those flourishing. And to these again and again eloquent speakers address hopeful greetings and the word of exhortation.

But notwithstanding the eloquence and the moral necessity of the duty inculcated, it does not appear that any large proportion of these societies are in a truly healthy condition. We have no desire to disparage their work, which indeed is of such a character that it cannot help being useful, even when the results are not tangible. Nor can anyone deny the substantial merit of many of the papers emanating from or called forth by these associations of pharmacists. Our own pages could be appealed to in evidence almost weekly. But notwithstanding the benefits and the usefulness of these associations, the experience of all connected with them impresses them with a knowledge of how essentially mortal they all are. *Vis inertiae* and the tendency to decay seems to be more or less characteristic of all of them.

Still they live on. As old ones perish new ones come into their places, and thus the desire and the need for associations are proved and satisfied. But might not these associations become a little more attractive, if not more useful? Surely the remarks of our Manchester correspondent last week ought not to be possibly applicable to any such body in such a city. Perhaps some improvement would be effected if the meetings were a little less formal. The sharp line of demarcation which sometimes exists between the council, the committee, the office-bearers, or whatever they call themselves, and the rank and file is a little discouraging to the latter. We are not sure that the societies would not be all the livelier if the officers were reduced to the smallest possible minimum, say a president and a secretary, who might be also treasurer, and these should be inevitably changed every year. Conversational meetings for the discussion of trade subjects, as suggested lately by Mr. Wyley, would be of considerable interest to a great many chemists, and would brighten up the monotony of business by the suggestion of ideas for the meetings. It has always been the case that when some topic of trade interest has taken possession of the minds of chemists, the best, fullest, and liveliest meetings of the associations have been held to consider it. If, too, by some sort of general consent associations all over the country would discuss the same topic at the same time, how useful it would be to us poor journalists of the trade, who have to grope as best we can after that very vague generality, the opinion of the pharmaceutical body.

But to get at it even under such circumstances would involve reporting, and this is another difficulty. To represent fairly in a single column the diverse views expressed by a dozen men in an hour's talk is an art which is not universally possessed. But a dozen such columns on a particular subject, presenting concise and cleverly-prepared reports of as many meetings in one of our issues would, we imagine, be read with lively interest by the whole trade, and would probably react on the associations themselves, by stimulating each to become more influential and more in the van of thought. Not only legislation, not invariably grievances, not always dispensing difficulties, not exclusively estimations of the Pharmaceutical Council's doings should furnish the subjects for these talks. Correspondents address us on these and a hundred other trade topics, and we expect they would talk as fluently as they write about them. We wish we could see a chance of attaining to something like the end we have indicated. Will some of the associations help us?

MAKING EVERY CHILD A CHEMIST.

IN the chemical section of the British Association one of the most animated discussions this year arose on the report of the committee appointed to inquire into and report upon the present methods of teaching chemistry. The committee was appointed at the Manchester meeting, and submitted a preliminary report at Bath; but it is since then that their ideas have taken definite shape, and the working scheme which they submitted at Newcastle-on-Tyne is mainly the product of Professor H. E. Armstrong's brain. Little notice has been given to this report, and apparently for this reason a leaded article, calling attention to it, appears in the last number of *Nature* over the initials W. R. D., in which there is little difficulty in recognising Professor W. R. Dunstan, the secretary of the committee. This article is written in a forcible style, and is specially addressed to teachers of science, so that it is likely to earn for the report the attention which it deserves. It will be remembered that last year's report referred to the manner in which chemistry is taught in 500 higher-grade schools. To complete the record Professor Smithells has prepared for the committee similar statistics regarding the position occupied by chemistry in public elementary schools which are controlled by the State education departments. He shows that as a rule chemistry is not taught on the proper lines, and the subject has failed to provide that mental training which it should be the main object of elementary teaching to develop. Here is the kernel of the whole matter, and it will favour brevity to keep these facts in view. Professor Dunstan is of opinion that "the mental discipline afforded by chemical investigation, in developing the powers of observation and inference, and in teaching the correct use of hypothesis, is not less conspicuous than the many applications of which the science is susceptible, both in industrial and 'common' life." Hitherto the chemical teaching of the schools has signally failed in exercising any mental discipline, and why? There are several causes of failure. The first is that the scholastic curriculum is already overloaded to a serious degree. Children of twelve, of ordinary parts, have at least eight subjects to study, viz., English grammar, English history, geography, arithmetic, reading aloud, writing and dictation, drawing, and Latin, if they have progressed fairly. These are taught in about twenty-five hours per week, five hours per day being the utmost that young heads can afford for mental concentration. It follows, therefore, that the study of science must be in the nature of mental recreation rather than of mental discipline, and so hitherto has it been treated in practice. A few desultory lessons from a junior master who is

enamoured of chemistry, or one or two hours per week from an itinerant science master, have been all that could be squeezed into the curriculum; the lessons have consequently been more of an entertaining than an instructive character. The net result generally has been spasmodic demands for pennyworths of sodium, red precipitate, and so forth. In view of this experience it is somewhat surprising that the British Association committee should have come to the conclusion that a change in the method of teaching science would give it a better footing in the scholastic curriculum. Professor Dunstan correctly says that in order to make science teaching successful "a fair share of the school time must be devoted to the subject, and a larger number of teachers must be employed than is usually the case." In other words, room must be made for it in the curriculum—a subject must be sacrificed—and the State will have to increase the education grant by fully half a million a year. In return for that a course of instruction in science will be given somewhat similar to Professor Armstrong's, which Professor Dunstan thus outlines:—

The course is divided into six "stages." Stage I. deals with lessons on common and familiar objects; the classification of these according to their uses and origin; elementary physiography and *Naturkunde* (geography and natural history). Stage II., with lessons in measurement. Stage III., with studies of heat on things in general; of their behaviour when burnt. Stage IV., the problem stage: to determine what happens when iron rusts; to determine the nature of the changes which take place when substances are burnt in air; to separate the active from the inactive constituent of air; to determine the composition of chalk; to determine the composition of washing-soda; and much other similar work. Stage V., the quantitative stage: study of the quantitative composition of some of the substances which have already been qualitatively examined. Stage VI., studies of the physical properties of gases in comparison with those of liquids and solids; the molecular and atomic theories, and their application.

The committee honestly submit their opinion that "in order that the plan shall produce its full educational effect, the instruction should be commenced at an early age, and be extended to every child in the school. They do not desire to bring forward physical science as a substitute for any of the other principal subjects of study, but they ask that, like these subjects, it should be looked upon everywhere as a necessary part of education, and that it should receive a due share of the time devoted to school work." Let it be admitted that science teaching is a splendid tool for promoting mental discipline; what, then, is there to sacrifice for it? It would be a splendid thing for science teachers if every child in the realm had to come under their guidance. We should have as many of them as of head-masters, and a new tax would have to be created to pay them, not to mention the new corps of science-inspectors which, the committee hints, may be formed from "the professors and lecturers in university colleges and other educational institutions." This is a part of the subject which the British Association committee have not considered. We wish they would.

THE PRICE OF CAMPHOR.

THE English refiners of camphor have again advanced their quotations this week at the rate of 1d. per lb. for bells, which are now quoted at 1s. 5d. to 1s. 5½d. per lb. for quantities according to the size of the order. Makers abroad have also put up their quotations, and all available indications seem to favour a continuation of a strong market in the near future. The move of the refiners is warranted by the extremely firm position of the raw article, crude Japan camphor being now

no longer obtainable at 110s. per cwt. on the spot, while for arrival as much as 107s. 6d. per cwt. has been paid—a price which, allowing for the charges of landing the drug, calculates even higher than the spot quotation. Since the end of October last year, when we reviewed the position of camphor, the article has generally been very firm, except for some time between January and April, and its average price for the year 1889 calculates considerably higher than that of any year since 1876. In the East the markets for the raw article are even stronger than here, and there is every reason to believe that the quantities which have been distilled in Japan this season are smaller than they have been for years. A glance at the statistical position of the article also—so far as London, the principal market, is concerned—will show a large element of strength in the raw material, our stock at the close of September being smaller than at any corresponding period of the last six years, while the imports between January and October have also been much less. It is true that the quantities taken out of the warehouses have also diminished, but this is perhaps owing in the first place to the fact that, whereas in former years there has always been a period when camphor was exceptionally cheap, the quotations during the present year have been uniformly above the average, and the manufacturers, therefore, have probably bought from hand to mouth only. The following are the figures to which we refer:—

	1889	1888	1887	1886	1885	1884
First-hand stock on Sept. 30	pkgs. 573	2,310	3,579	3,652	6,902	10,101
Imports, Jan. 1-Sept. 30		2,128	5,932	3,754	3,633	4,304
Deliveries, Jan. 1-Sept. 30		2,692	5,620	6,351	7,108	5,729
					5,729	5,675

As regards refined camphor, the price of English bells on November 1 of last year was 1s. 4d. per lb., with crude camphor at 100s.; whereas now, with the raw material at 110s. per cwt., it is 1s. 5½d., or as nearly as possible proportionate to last year's figure. The camphor refiners at that time all complained that the price at which they sold the refined product was too low in comparison to what they had to pay for the material, and in fact, without going into details, it will be seen that, if the raw product costs 110s., and the refined sells at about 160s., the margin of profit cannot be so very large, if we allow for the loss by impurity, which is always considerable, that of subliming, the cost of labour, packing, &c. Foreign camphor, it is true, is generally quoted below that of English manufacture, but of late the difference has been much less than formerly, and it is also reported that the Continental makers are very full of orders for delivery over the early part of next year, which, to some extent, may affect their power to undersell our manufacturers to the same degree as they might do under ordinary circumstances. Another factor which may possibly be of some weight in the position of the article is that a Hamburg chemical factory, which, up to the present time, has produced about 200 tons of refined camphor per year, has been bought up by a local dynamite company, and may cease to be a source of supply. We have also reported the rumours which are current that camphor is used as an ingredient in one of the new smokeless powders, and though that statement is alternately denied and confirmed, and need not be taken as absolutely reliable, it is quite possible that it may prove correct, in which case large quantities of the article will be required for that purpose (unless the inventor should turn for cheapness to turpentine camphor), while the supply, according to all accounts, is becoming more restricted every year. No doubt we shall still see a good many ups and downs in a drug which has gained an exceptional reputation for inconsistency in the past, but we see no reason to alter the opinion, which we have expressed more than once, that the tendency of camphor is to become gradually dearer.

Jaborandi as a Hair-restorer. A correspondence has been going on recently in the London *Standard* regarding the use of jaborandi as a hair-restorer. The fact that this drug and its active principle do have a powerful influence upon the hair is well known. Thus Professor G. H. Wheeler states that he knew a gentleman who became partly bald after an attack of small-pox, the remainder of his hair turning grey. By the use of a decoction of jaborandi and sage, not only did he recover his hair, but it was restored to its natural colour. Dr. F. Borel states that about twenty years ago he attended an old woman who was suffering from hypertrophy of the left side of the heart. He treated her with jaborandi, and her hair, previously white as snow, commenced to be coloured. A "Master of the Hair Doctor's College" also writes that jaborandi has been used locally for several years by members of the college, and is regarded by them as one of the sheet-anchors to recover the hair in neurotic and patchy baldness, and it has been also noticed to restore white hair in a few cases. He has human hair in his possession which is white at the roots and dark at the tips; others dark at the roots and white at the tips, and likewise dark at the tips and roots and white in the middle. It is well known, he states, that pilocarpine and jaborandi increase all the dermic secretions by their action, and increased vitality to the pigmentary functions may be the cause of the hair colour returning. Mr. J. G. Isaacs, of Neath, writing to us, says:—"It seems almost incredible, in spite of the testimony of these medical experts, that the same influence not only effects a complete change of colour, but entirely restores hair in places which had been absolutely bald for years. Chemists will readily see how important is this subject when they recall the number of applicants they get from time to time for something to make the hair grow." He further asks how the jaborandi is best applied. That information is not difficult to obtain. In *THE CHEMISTS' AND DRUGGISTS' DIARY* for this year the following formula is given for "The Premier Hair-restorer":—

Sulphate of quinine	20 grains
Tincture of jaborandi	1 oz.
Glycerine	1 "
Eau de Cologne	2 "
Bay rum	2 "
Rose water	11 "

Dissolve the quinine in the rose water with the aid of 20 drops of dilute sulphuric acid, and add the glycerine. Mix the tincture, eau de Cologne, and bay rum, and add to the rose-water mixture.

* *

Dragon's Blood in the Seventeenth Century. A certain Francis Gauche, of Roan, who visited Madagascar and the "Coast of Africk" in 1638, gives the following fantastic account of the dragon's-blood tree in a description of his travels:—"Whilst we were in a large Village on the Right Hand coming down the River, which is call'd *Dulce*, three Quarters of a League from the Bay, people of the Neighbouring Villages of the *Machicores* presented me with 6 Pieces of Dragon's Blood, each of them 3 Inches long, like Ends of Black Puddings, marbled like the *Alicant* Soap, red, white and black. They call this Dragon's Blood '*Auly*' here, signifying, *Ointment to staunch Bleeding*, in return for which I gave them some small Coral; and they saying those Pieces of Dragon's Blood were made of pounded Leaves, growing on certain Trees about Port *S. Augustine*, I presented one of them with a small string of Coral, to show me those Trees. They conducted me to a Wood, that is but 2 Musquet Shot from the Bay; where among Thorns and Bushes, they shew'd me a very spreading Tree, as big as a Pear Tree, the Leaves long, but narrower than the Lawrel, smelling like Violets in *March*; the Flowers and Blossoms white and very odoriferous, growing in round Clusters, and having only 5 Leaves each, very regular; they close up at Night, and are no bigger than a *French Double* (which is less than our *Farthing*). From the midst of them sprouts a Fiber of a reddish Colour, which runs up in such manner as to represent a Dragon. These Flowers being pounded and put into hollow Canes, make those Pieces, above mention'd, after being dry'd in the Sun, and the Canes or Reeds which inclosed them broken off. Thus is the Dragon's Blood made, of which Apothecaries and Botanists give a very different

Account. I have often us'd it with Success to stop Bleeding, following the Example I had set me by the *Machicores*, have stopp'd the Bloody Flux by Fumigations, putting this Drug into the Fire, and causing the Sick to receive it at the Fundament."

* *

Cinchona History. The idea of acclimatising cinchona in the British West Indian islands was conceived about thirty years ago, when the exploring party who had been sent to South America to obtain cinchona plants and seed for British India were instructed to send any surplus they might have to the governors of Jamaica and Trinidad for experimenting purposes. In 1861, the year following the receipt of the seed, there were already four hundred plants ready for planting out in the Jamaica botanical gardens. As the climate of Bath Gardens, where the first experiment was made, was unsuitable for the successful growth of cinchonas, they were tried at Cold Spring Coffee Plantation, at an elevation of 4,000 feet. There the climate and soil proved all that could be desired, and in November, 1862, a plant of *Succirubra* cinchona had attained to the height of 44 inches, with leaves measuring $13\frac{1}{2}$ inches long by $8\frac{3}{4}$ inches broad. The same plant, when two years old, measured 6 feet in height, with ten branches, having a circumference of stem at base of $4\frac{1}{2}$ inches.

The experience gained in these preliminary attempts paved the way for the larger enterprise undertaken by the Jamaica Government in 1868, from which date cinchona planting in the island took a fresh departure. A further supply of seed, consisting of *C. officinalis* and *C. calisaya*, was obtained from Ceylon. In 1886 the Government cinchona plantations in the Blue Mountain district occupied 143 acres. For the purpose of encouraging the cultivation of cinchona by private enterprise, the Government plantations during the last few years have distributed 1,250 oz. of cinchona seed, 1,200,000 cinchona seedlings, and 469,000 cinchona plants.

Large shipments of cinchona bark were made from the Government plantations during the years 1879 to 1884, and the prices realised proved that the climate and soil of Jamaica were particularly well suited to the successful cultivation of cinchona plants. As much as 10s. per lb. was obtained for root bark of *C. officinalis*, while on large shipments the average price realised was 6s. 7d. per lb. All the various species of cinchona have been introduced to Jamaica, including the valuable *C. Ledgeriana*.

About 2,600 acres have been taken up by private planters for the cultivation of cinchona in Jamaica, and the industry there is now well established. But as Jamaica was late in the field, and only now produces bark of sufficient age to be placed in the market, the planters are compelled to hold back their bark until there is such an improvement in the market as will justify regular shipments. This, it is hoped, will only be a question of time. Meanwhile two samples of Jamaica Loxa bark, from trees six years old, grown on a private plantation at 5,000 feet, have been lately analysed by Mr. David Howard and found to contain:—

	Quinine	Cinchonidine	Cinchonine	Amorphous
1.	2.23 per cent.	0.44 per cent.	0.04 per cent.	0.51 per cent.
2.	1.74 "	0.57 "	0.06 "	0.55 "

In each case there was a trace of quinidine.

The tests are thus very much what Loxa bark of similar appearance from South America would give. It is rather a Chaguera than a Crispa or Uritusinga, which gives the richer yields that characterise the finest officinalis from the Doda-ketta plantations. The fine old South American HO Loxa quills, which would now be worth in London from 2s. 2d. to 2s. 6d. per lb., are used by French pharmacists for flavouring liqueurs. They are said to give to the latter a bouquet which cannot be obtained with any other variety of bark, or even with Loxa itself when grown in India, Java, or Jamaica. For this reason only the genuine South American Loxa realises prices wholly out of proportion to its alkaloidal value. It is also said that common hard Pitayo bark at 2d. to 3d. per lb. is used in Spain for giving a "body" to sherry wine.

HOT BLACK COFFEE will stop the severest retching and nausea that no other prescription seems able to touch.



AND
Literary Notes.

"Men and Women," by Mr. James Platt, is the comprehensive title under which the philosophic cloth-merchant of St. Martin's Lane strings together a marvellous collection of incongruous clippings from Darwin to Ingersoll, and from Stuart Mill to Mona Caird, with his own reflections interjected. It strikes us as unfair that the *Daily Telegraph*, which most likely originated the idea of the book, should be the one authority which does not seem to be recognised.

Tooth Extraction. By John Gorham, M.R.C.S. Eng. Third Edition. 1889. London: H. K. Lewis. Price 1s. 6d.

THIS little work is an exceedingly useful one for those who are beginning dental practice. It gives reliable information regarding the teeth and their decay, and tells, in a simple manner, how they should be extracted and what instruments to use.

Lecture Notes on Flowers and Fruits. Parts I. and II. The Westminster College of Pharmacy. 6d. each.

THESE are useful notes, suitable for Minor and Major students, which have been compiled by the principal of the Westminster College. Each part describes fully sixty species or genera, and the information given is of a time-saving and precise character.

A Guide to the Alterations in the British Pharmacopœia (1885). By Prosser James, M.D. Third edition. London: J. & A. Churchill. 8vo. Pp. 126.

THIS was amongst the first published criticisms of the present Pharmacopœia, and the fact that the book has reached a third edition is the best proof that it is not of ephemeral interest. Indeed, it is of real value, is written in a highly racy style, and the pity is that the author does not comment on the whole of the Pharmacopœia in the same manner. The "Guide" is intended for medical practitioners, so that therapeutics receive the major part of the author's attention. That, however, makes it all the more useful to pharmacists, who will find their own portion of it reliable. Dr. James has omitted to note the alterations in the latest reprint of the Pharmacopœia, probably for the reason that "laudanum" and "paregoric" cannot be called new preparations. We may also note that his description of chrysarobin is not quite in accordance with the reprint. It wants the word "purified," which makes all the difference in the world to the description, and nullifies Dr. James's first critical paragraph.

Die Neueren Arzneimittel (New Remedies). By Dr. Bernhard Fischer. Fourth, enlarged, edition. Berlin, Julius Springer. 1889. 8vo. Pp. 312.

THIS German work reveals the progress of the business of introducing new remedies. The first edition, published only four years ago, comprised 188 pages. In the third edition, published about a year since, five new bodies were included, and the present edition gives particulars of the following fifteen more, viz., chloral-ammonium, chloralamid, chloral-cyanhydrate, eucalyptol, exalgine, hydracetin, mercury benzoate, imidosuccinate, and thymate, hydroxylamine, methacetin, methyl-chloride, methylene-chloride, myrtol, and thiol. The names and synonyms of the various bodies are given in the work. Antipyrin, for instance, possesses a number of aliases. In France it appears as analgesin, anodynin, parodyne, and sedatin, while in the United States it has been proposed to call it methozin. The author gives the history of each compound, and indicates and explains the constitutional formulae, and the process of building up. The physical and chemical characteristics of the bodies are pointed out, special attention being bestowed

on tests for determining purity, the best method of stocking, the therapeutical effects, and useful hints on the best way to dispense and prescribe them. Dr. Fischer is a competent authority on these new products. He has been assistant in Liebreich's laboratory, and in the Pharmacological Institute of Berlin. We do not know of any other book which takes up this department so thoroughly, and to those who can read German, and who are interested in the scientific side of the latest medicinal agents, we can heartily commend it.

"An Introduction to Chemical Science." By R. P. Williams, A.M. Edited by P. B. Lascelles, M.A., F.C.S. London, Ginn & Co. 1889. 8vo. Pp. 230.

THIS is essentially a class-book of chemistry, and, fortunately, not really an addition to the large number of elementary chemical manuals which burden our literature, for it has already acquired a considerable degree of popularity in the United States, and Mr. Lascelles has prepared the present edition for English requirements. In one sense, therefore, it is a newcomer, and in a larger sense we welcome it as such, for it marks a decided departure from the traditional method of teaching chemistry. There are three distinct features to be noticed in connection with the "Introduction": first the practical side, second the problematic or intuitive, and third the technical or instructive. From beginning to end, the object of the author is to get pupils to perform for themselves such experiments as demonstrate the principles upon which the science is based. Herein lies the practical element. Then the text, in many instances, is written in what Americans expressively term the "quizzing" style. The pupil performs, for example, an experiment, and on returning to the book he finds some questions which may not have occurred to him, but which the results of his experiments naturally lead up to, and so the proper deductions are brought home to him. Further, very early in the book chemical arithmetic appears; at first it is only simple addition sums, such as "How many atoms in PbSO_4 ?" or "How many parts by weight of each element are required for FeS ?" and gradually it extends to problems such as "How much Zn is necessary for 14 grammes H?" and "A certain volume of H weighs 0.448 g. at standard temperature and pressure. How many litres does it contain?" These, and even more complicated problems, are presented to the pupil in a carefully graduated manner, so that he regards them from the first as ordinary arithmetic problems, and is thereby relieved of the common dread which many pupils in chemistry have of calculations and equations. In this way the pupil's intelligence is exercised, and the knowledge which he acquires is largely intuitive. The third feature lies in the application of the text to common matters and processes. For example, under carbon we find information regarding coke, mineral coal, anthracite, soft coal, cannel coal, and peat turf. It is briefly expressed, but explicit. The pupil practically demonstrates the reducing action of carbon, its influence in decolorising, and so on. Moreover, as he advances, chemical theories are slipped in. He learns not only what the electrolysis of water is, but at the same time a little about electricity generally. Some of the most important industries, such as alkali manufacture, the Bessemer-steel process, photography, and the manufacture of coal gas, are employed to illustrate important chemical laws, and even organic chemistry is introduced, thereby explaining, e.g., the chemistry of fermentation and the action of micro-organisms. This somewhat free analysis of the book indicates its scope. The aim of the author appears to be to make the science of chemistry a true educating influence, and he succeeds admirably in this respect, also ensuring that the pupils, after a year's work (we judge that three lessons per week will be required to go properly through the sixty chapters), will really have an intelligent knowledge of the chemistry of common things. When we speak of the author, we ought, probably, to include the editor (Mr. Lascelles), an assistant master at Harrow School, whose consistent judgment in adapting the book to the requirements of young pupils is observable throughout. With such books as this for class practice, there is some hope that the study of chemistry will be of real benefit as a part of scholastic education, and it thoroughly deserves the consideration of all teachers of chemistry. We ought to mention that the book is very well illustrated, and that the experiment directions are precise and not misleading.

CANADIAN NOTES.

A NEW pharmaceutical journal has made its appearance in Canada. It is rather elegantly got up, and is smart on the whole.

TARIFF CHANGES.—Amongst the articles which are to be admitted free until the next Parliamentary session are sulphate of alumina, arseniate, biarseniate, chlorate and stannate of soda, tannic acid, tartar emetic, and chlorate of potash.

PEARS' SOAP is being sold in London, Ont., at less than cost, and there is to be a meeting of the trade about it. Other price matters will be spoken about at the same time. The desire to have uniformity in all the counties as to prices is growing, and the Kent Druggists' Association, in recently adopting a price-list of their own, expressed the opinion "that if a price-book could be compiled, suitable for all druggists in the province, it would be a move in the right direction, as well as being a considerable saving in cost of printing."

ONTARIO COLLEGE OF PHARMACY.—At the annual meeting of this college the following were the persons who were successful in polling a majority of votes, and who, accordingly, have been elected members of Council for the ensuing year:—

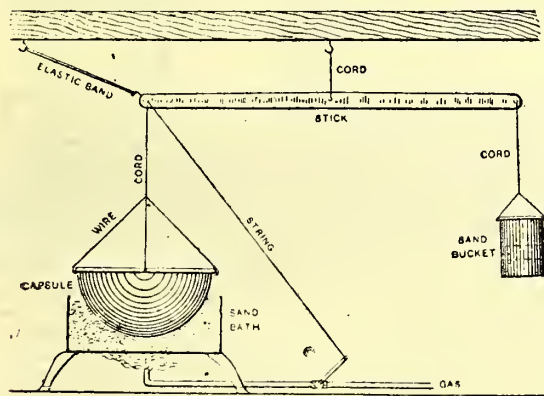
Andrew, Jeffrey, Toronto
Clark, John A., Hamilton
D'Avignon, J. E., Windsor
Hall, John J., Woodstock
Hobart, G. S., Kingston
Lawrence, L. T., London
MacKenzie, J. H., Toronto

McGregor, C. K., Brantford
McKee, John, Peterboro'.
Petrie, A. B., Guelph
Sanders, W. B., Stayner
Slaven, J. W., Orillia
Watters, Henry, Ottawa

For the presidency, Mr. Clark was reappointed at the first meeting of the Council, and Mr. Hall is associated with him as vice-president.

AUTOMATIC EVAPORATING APPARATUS.

MR. F. E. RAY, of Sacramento, Cal., describes in the *Pharmaceutical Record* an apparatus, which he has designed, for checking evaporation when it has reached a desired point. It is represented in the following illustration, which speaks for itself:—



The evaporating-dish is counterpoised by sand placed in the bucket; then the weight to which the liquid is desired to be evaporated is counterpoised by an additional quantity of sand. The elastic band and the string to the gas-faucet are then arranged and heat applied. When the liquid has evaporated to the desired weight the falling of the sand-bucket causes the closing of the gas-faucet, and the elastic band swings the dish away from the sand-bath.

PHARMACY IN AUSTRALASIA.

FROM the September number of *The Chemist and Druggist of Australasia* we glean the following items:—

THE DENTAL ASSOCIATION, N.Z., is reported to be in full operation, its chief object being to raise the standard of education, and to establish a course by which persons violating the provisions of the Dental Act shall be proceeded against.

THE usual routine business was transacted at the meetings of the Victoria Pharmacy Board and Pharmaceutical Society. Several alterations are proposed in the tariff, which are of interest to our readers.

DRUGGISTS MUST HAVE A LIQUOR LICENCE.—There is very little to report from Tasmania, except that the Government have introduced an amendment of the licensing law, by which druggists will be required to take out a licence for the sale of medicinal liquors at a fee of 5*l*.

NEW SOUTH WALES PHARMACEUTICAL AFFAIRS are comparatively quiet, the chief event of the month apparently being the appointment of a new director of the College of Pharmacy, in the place of Mr. E. Quayle, who is now in England. Mr. Fred Wright is his successor.

THE RECIPROCITY QUESTION calls for a fresh settlement, the Intercolonial Congress held in Melbourne three years since having for various reasons produced little result, and a cross-fire of questions and remonstrances is now going on between South Australia, Queensland, and New South Wales, and between both the latter and Victoria.

THE MIDLAND PHARMACEUTICAL ASSOCIATION, N.Z., is still very active respecting the proposed Medical Bill before Parliament, and, owing to the vigorous opposition shown to the measure by the chemists of the colony, mainly through the instigation of the association, it is very unlikely that the Bill will be passed, unless in a greatly modified form.

IN SOUTH AUSTRALIA we learn that a deputation has waited on the Attorney-General with respect to the proposed Pharmacy Bill. The minister acknowledged that the measure was one of great importance, and suggested that a draft Bill should be handed to the Government for consideration in cabinet, which suggestion was acted upon, but the draft Bill was afterwards returned to the Society, as the Government require time to consider the question.

THE PHARMACEUTICAL SOCIETY OF QUEENSLAND held their annual meeting on August 21, at which, of course, the annual report was read, from which it is evident that the Society has done some good steady work. The retiring President (Mr. Field), in his address, took a retrospective glance at the work of the Society since its establishment, in 1880, and in the course of his remarks a graceful tribute was made to *THE CHEMIST AND DRUGGIST* and *The Chemist and Druggist of Australasia*, which journals are supplied to the members. The Government have placed the sum of 100*l*. on the estimates for 1889-90, for the purpose of the College of Pharmacy, which, if passed, will mark a new epoch in Queensland pharmacy. The Pharmacy Board of Queensland is also now being recognised at head-quarters, as being both a Government as well as a governing body.

ONE DOSE WAS ENOUGH.—A New Jersey doctor prescribed for a German woman, and the druggist who made up the powders, in a fit of absent-mindedness, rolled up the little weights he had used, and gave them to the messenger instead of the powders he had prepared. Next day the doctor called upon his patient, and asked how he was getting on. "I vas got along bretty goot," she replied:—"Put I ton'd know how much to take of dot funny meticians. Dose bilis pe two, dree sizes, and I can'd know by meselluff vich I shall take furst. I took dree or four leedle vons furst." The doctor asked to see the medicine, and was astonished at beholding the weights. "Are these what you took?" he asked. "Oh, yah. Didn't I dell you I took dree or four. Und dem make me veel a crate deal besser alreaty." The doctor told her she had taken enough of the medicine; and so strong was her imagination that she got well speedily, and was soon at her work again.

Practical Notes and Formula.

SOLUBLE ESSENCE OF GINGER

is generally made from the strong rectified-spirit tincture, which is diluted with its own volume of water before being treated with alkali. A much better product is obtained from a proof-spirit tincture, half the strength of stronger tincture of ginger, treating it with alkali in the ordinary manner. The product is more pungent, and of finer aroma.

FRECKLE LOTION.

THE following lotion is said to speedily remove freckles:—

Chloride of ammonium	3j.
Hydrochloric acid	3jss.
Glycerine	3j.
Lait virginal	3jss.

Mix. Apply to the freckles morning and evening with a camel's-hair brush.

UNFERMENTED ORANGE WINE.

Citric acid	1 oz.
Carbonate of potash	1 drachm
Sugar or honey	To taste
Infusion of orange peel	4 oz., more or less
Spirits of wine	5 or 6 per cent.
Essence of cloves	5 drops
Water, to	1 quart

Filter and clarify, and allow to stand at least one month before using, by which time all the ingredients will be thoroughly incorporated and blended.—*Mineral-water Trades Guardian.*

OLEATE OF MORPHINE.

FOR making a 10-per-cent. solution extemporaneously, Mr. S. A. McDonnell gives the following directions:—

Acid. oleici	gr. 450
Morphinæ sulphatis	53

Mix, place on a water-bath, apply heat, and add gradually liq. ammon. conc. minim 25, stirring constantly until a perfect solution takes place. Time, about ten minutes in all. Some specimens of morphine sulphate may require a few drops more or less ammonia to effect a solution. The heat dissipates any free ammonia, while any possible resulting ammon. sulph. does not seem to show itself, nor is there any indication of the formation of a soap.

GREEN WORM ON CABBAGES.

PROFESSOR HOWARD, an American entomologist, informs the *Scientific American* that the following emulsion is excellent for killing the green worm on cabbages:—

Kerosene	2 gallons
Common soap or whale-oil soap	$\frac{1}{2}$ lb.
Water	1 gallon.

Heat the solution of soap, and add it boiling hot to the kerosene. Churn the mixture by means of a force pump and spray nozzle for five or ten minutes.

The emulsion, if perfect, forms a cream which thickens on cooling, and should adhere without oiliness to the surface of glass. Dilute, before using, 1 part of the emulsion with 9 parts of cold water. The emulsion is said to be of great use upon hop vines, and will also kill the lice on chickens.

DANDRUFF POMADE.

Salicylic acid	30 grains
Borax	15 "
Peruvian balsam	25 minims
Oil of anise	6 drops
Oil of bergamot	20 "
Vaseline	6 drachms

Mix.

DESTROYING NERVES OF TEETH.

THE difficulty in preparing a nerve paste consists in the insolubility of the arsenic, or the preparation of an impalpable powder, which is best obtained by dusting through a cloth, after long pulverising in a mortar. Dr. Bryan re-

commends 1 part of this powder to be rubbed with 2 parts each of antipyrin and lanolin, to form a stiff paste. The lanolin, in a dry cavity, seems to penetrate the tissue, and to cause the antipyrin and arsenic to act, the first reducing actual inflammation of the part, and preventing further pain during the action of the arsenic.

GERMAN HAIR SPIRITS.

THE following are good applications for dandruff. A teaspoonful of either should be well rubbed into the roots of the hair, and then dried with a soft cloth. If the hair is of a dry nature, a little good pomade may be used occasionally:—

	Parts
Tincture of quillaia (1 in 10)	200
Tincture of capsicum	5
Eau de Cologne	20
Glycerine	30
Carbonate of ammonia	3
Mix.	
Spirit of ether	3 oz.
Tincture of benzoin	2 drachms
Vanillin	$\frac{1}{2}$ grain
Heliotropin	1½ "
Oil of rose geranium	2 drops
Mix.	

DISINFECTING CANDLES.

	Parts
Wax	50
Sulphur	20
Saltpetre	10
Charcoal	10
Flour paste	10
Mix.	

These candles are said to be useful for burning in water-closets.

RUBBER-STAMP INK.

	Parts
Aniline blue, water soluble, 1B	3
Distilled water	10
Pyroligneous acid	10
Alcohol	10
Glycerine	70

Mix them intimately by trituration in a mortar. The blue should be well rubbed down with the water, and the glycerine gradually added. When solution is effected, the other ingredients are added. Other colours are produced by substituting for the blue any one of the following:—Methyl violet, 3B, 3 parts; diamond fuchsin, I, 2 parts; methyl green, yellowish, 4 parts; vesuvin B (brown), 5 parts; negrosin W (blue black), 4 parts. If a bright red ink is required, 3 parts of eosin BBN are used, but the pyroligneous acid must be omitted, as this would destroy the eosin.

DESTROYING WEEDS IN LAWNS.

A CORRESPONDENT of the *Newcastle Journal* says he has never known sulphuric acid to fail if properly applied. If applied on a wet or damp day when the atmosphere is largely charged with moisture, or when the dew is on the grass, the corrosive action of the acid is weakened, and, though the head of the plant is destroyed, the unaffected root sends up new shoots. If, however, it is applied to the crown of the plant on a hot summer's day, the acid has a chance of thoroughly doing its work, and the root rots down to the very end. A single drop ought to be applied by means of a small glass tube to the crown of the plant, and in the course of a week the whole root will be burnt up. Of course, the lawn will present a patchy appearance till the grass has grown on the bare place. This applies to dandelions and weeds of the plantain tribe; it is not so good for daisies, as they do not disappear like dandelions, but disfigure the lawn for months with their tough withered leaves. If daisies are to be eradicated, the best plan is to loosen the soil with an old bread knife passed under the patch and raised a little, and then the plants carefully rooted out, care being taken not to leave broken roots or fibres in the soil, as these produce each a new plant. Sow the patch immediately with good lawn seed, and in a few weeks the lawn will be all right.

Scientific Notes :

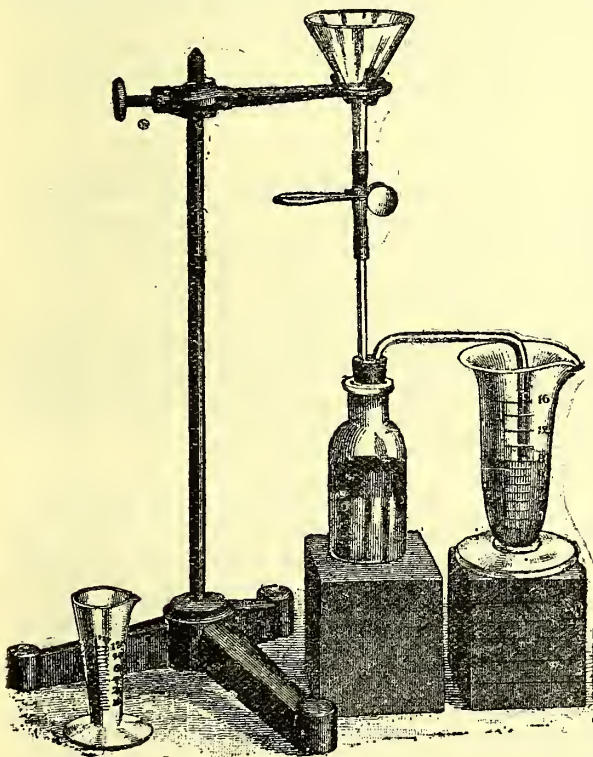
On Chemistry, Pharmacy, Botany, Materia Medica, &c., Original, Selected, and Translated.

THE ENGLISH STANDARD POUND.

It was in 1824 that it was decided by Parliament that the avoirdupois pound which had long been used, and which was very nearly 7,000 troy grains, should be finally fixed at 7,000 troy grains. One of the troy pounds made in 1758 became the Imperial standard, but it was destroyed by fire in 1834. The present English standard pound was made in 1844-46 by Professor W. H. Miller. A number of weights had been very accurately compared with the lost standard, and the first step for recovering the mass of the lost standard was to compare these weights among themselves. The mean of the weighing was, therefore, taken as the standard. It may be mentioned that the discrepancies between the weights amounted to 0.0226 grain in the case of those made of brass, while the platinum weights were only 0.00019 grain "out."

A HOME-MADE NITROMETER.

DR. E. R. SQUIBB has used the apparatus figured below in the estimation of spirit of nitrous ether by Allen's process. Its principle depends upon the fact that the evolved nitrous gas drives mercury from the bottle into the measure, the volume of the metal so displaced being equivalent to the volume of the gas evolved.



In charging the apparatus for a testing, the bottle is filled so nearly full of mercury that when ten or twenty drops of water are put upon it the neck is full to the lip. Then push the cork home, leaving off the pinchcock to allow the mercury to rise in the tubes, and fill a part of the horizontal portion of the bent one. Connect the funnel as shown, close the pinchcock, put about 1 c.c. of dry mercury into the funnel, and slowly and cautiously let it down into the bottle, by slightly opening the pinchcock, until the bent tube is entirely filled with mercury, and some has escaped into the measure under the tube. When this mercury is poured out and the measure replaced the apparatus is ready for the assay.

Now place a fluid drachm of the spirit to be assayed into the funnel and cautiously let into the bottle by means of the pinchcock. Next admit the same quantity of the solution of potassium iodide, and finally the same measure of the diluted sulphuric acid in the same way. This will make in all 3 fluid drachms of liquid to be subtracted from the volume of the mercury in the receiving measure. As soon as the solution of the iodide is admitted the reaction begins, and in ten minutes is practically over. The receiving measure may then be taken away, and the quantity of mercury read off.

TEST FOR HYDROGEN PEROXIDE.

In *Ephemeris* we find the following test, which was given to Dr. Squibb by Mr. Charles Marchand, of 10 West 4th Street, New York, one of the oldest makers of peroxide of hydrogen in the country:—A test solution is made by dissolving 1.852 gram. of potassium permanganate in distilled water and making up the measure to 500 cubic centimetres. Each cubic centimetre of this solution is equal to one volume of active oxygen, when applied to one cubic centimetre of any solution of peroxide of hydrogen. The test is made by adding to about 50 c.c. of water acidulated with 5 drops of sulphuric acid a cubic centimetre of the solution of peroxide of hydrogen to be tested. Into this, with constant stirring, is dropped, from a graduated burette or pipette, the permanganate solution, until the colour of the permanganate ceases to be discharged. Each c.c. and fraction of a c.c. required to reach this point indicates one volume and fraction of a volume of active oxygen that is available in the solution tested.

NEW SPECIFIC GRAVITY BOTTLE.

DR. SQUIBB also describes a new specific gravity bottle, which we figure. He has them made in three sizes, 25, 50, and 100 grammes. The peculiarity of the bottle is that the tube stopper is lengthened out so that the central channel will permit the bottle to hold the volume of water at any temperature between 4° and 25° C., thus adapting it to all the standards in use. The tube between these points is graduated to half millimetres or less, and at the top, above the scale, it is widened so as to allow room for the expansion of light liquids, without loss, when the bottle is adjusted at 4° C., and weighed at higher temperatures, the expanded portion being loosely closed with a cork during the interval of warming between the adjusting and the weighing. The bottle is intended for research or other highly accurate work, and so careful is its designer to have absolute accuracy that he only uses bottles which have been two years made before adjustment. This is because glass contracts for a year or two after it has been heated or annealed.



DELICATE BALANCES.

THE balances used in mints in the time of Queen Elizabeth, and for two centuries before, indicated to the extent of about 1 part in 10,000. The balance which Mr. Harris, of the London Mint, used in 1743 indicated one-eighth of a grain on a troy pound, or about 1 part in 50,000. Fifteen years later he had a balance which turned with 1/230,000 part of its load. In 1798 Sir George Shuckburgh had a balance sensitive enough to indicate 0.01 of a grain when loaded with 16,000 grains, or about 1 part in 1,600,000. The balance used by Fortin in 1799, in adjusting the kilogramme of the Archives, was not quite so delicate, its sensitiveness being only the 1,000,000th part of its load; but in 1844, for the adjustment of the present English standard pound, Professor Miller employed a balance whose index moved about 0.01 of an inch for a change of 0.002 of a grain in a load of 7,000 grains. He read the index with a microscope, and found the probable error of a single comparison of two avoirdupois pounds to be 1/12,000,000 of either, or about 0.00058 of a grain. At the present time it is claimed that two avoirdupois pounds can be compared with an error not exceeding 0.0002 of a grain, and two kilogrammes with an error not exceeding 0.02 of a milligramme.

Medical Cleanings.

ANTIFEBRIN IN EPILEPSY.

DR. THEODORE DILLER writes favourably in the *Therapeutic Gazette* of the use of antifebrin in epileptic cases. He gives it in doses of 4 grains. A marked reduction of the number of fits follows the steady use of the remedy.

CREOLIN IN DYSENTERY.

SEVERAL Russian physicians have had excellent results in the treatment of dysentery with enemata of solution of creolin. The strength varied from 0.5 to 1 per cent., and the injection was used from two to four times per day, at the rate of five pints on an average each time.

PULSATILLA IN EPIDIDYMITIS.

DR. R. J. CARTER, of the Male Lock Hospital, Soho, has treated a number of patients suffering from gonorrhœal epididymitis with tincture of pulsatilla, in doses varying from 5 to 30 minims every four hours, and reports that "it is not even a useful adjunct to the treatment" of the disorder.

STYRONE AS AN ANTISEPTIC.

STYRONE, prepared from liquid storax and balsam of Peru, is recommended by American surgeons as an antiseptic. It is said to be efficient, non-poisonous, and agreeable in odour. It may be used as a deodorant for ulcerating cancers in the form of a spray, consisting of styrene, 1 drachm; glycerine, 1 oz.; and water, 1 oz.; or applied to raw surfaces in combination with olive oil or vaseline.

TYPHOID FEVER

is the latest enemy to the canine race. Dr. J. R. Roberts, of the Indian Medical Service, describes (*Ind. Med. Gaz.*) symptoms occurring in dogs of European breeds in India, which are identical with what mark the course of the fever, and if his observations are correct the fact that dogs are liable to typhoid would help to explain the continued prevalence of the disease in Indian cantonments, in spite of the sanitary precautions taken.

CONSUMPTION.

THE tubercle bacillus flourishes best at a temperature of 99° F., and is rapidly killed below 84° F., or above 107.6° F. So Dr. A. Bowie, of Harley Street, W., states in the *Lancet*, and acting on his belief he has commenced to treat consumptive patients with inhalations of superheated air. His experience is that the air yields results of a very favourable nature. The apparatus used was Weigert's, in which the temperature expired by the patient after a few trials may reach from 120° to 140°. The inspired air, according to the thermometer in the tube, may be as hot as 570°, but Dr. Bowie does not think the actual inspired air is ever hotter than from 280° to 300°.

THALLIUM IN MEDICINE.

SOME time ago we stated on the authority of a contemporary that thallium sulphate had been used with success in the treatment of gonorrhœa. This, we remarked at the time, was the first use to which Crookes's metal had been put in therapeutics. Now it appears thallium was not meant at all, but thalline sulphate— $(C_{10}H_{13}NO)_2$, H_2SO_4 —which was for some time used as an antipyretic and antiperiodic, but has been displaced by antipyrin. For gonorrhœa and gleet 1 and 2 per cent. aqueous solutions of thalline sulphate are used as an injection with good effect. It is also used in the form of antrophors.

EFFECT OF Pilocarpine ON THE HAIR.

DR. W. PRENTISS, of Washington, stated at the recent annual meeting of the American Medical Association that some years ago a patient of his, a lady aged 25, employed pilocarpine to relieve uræmic symptoms, and her hair changed from light brown to black. Another, a lady aged 72, took jaborandi for disease of the kidneys, and her eyebrows changed from white to black. He quoted cases from German and other medical literature, in which the use of pilocarpine

had caused the hair to grow where it had fallen out, in some instances the new hair having a different colour from the old. It had been doubted by many eminent in the profession whether the hair ever changed colour suddenly. To settle that question, he had searched the library of the Surgeon-General's office, and found records of indisputable cases, the particulars of which he submitted to the meeting.

REMOVAL OF MOLES.

IN a recent number of the *Practitioner* Dr. Jamison writes on the use of sodium ethylate in removing hairy moles on the face. He operated in this way. The hairs were cut off as closely as possible with a very fine pair of scissors, and the mole was then painted over with sodium ethylate, a fine glass rod being used. When the mole had a varnished look the ethylate was gently rubbed in with the glass rod, to make it penetrate more deeply into the hair follicles. The mole had quite a black look when the operation was over. A hard crust formed over it, which was nearly three weeks in becoming detached. When it came off the hairs were seen to be destroyed, and the surface of the mole had a smooth, somewhat cicatricial, appearance, of a much lighter colour than before; and this favourable condition continued until the mark was scarcely noticeable.

INCONTINENCE OF URINE IN CHILDREN.

DR. DESCROIZILLES says that incontinence of urine in children, although frequently of nervous origin, also often accompanies constitutional weakness, and that the strict application of hygienic and dietetic principles will frequently effect complete cure. He has tried various remedies, of which the following are a selection:—

Syrup of belladonna 2 fl. oz.

Syrup of tolu 1 "

Syrup of marshmallow 1 "

M. A half-teaspoonful two or three times a day.

Atropine ½ grain

Sugar 3 drachms

M. Make into forty powders. Two to four to be taken daily.

Bromide of potassium 1½ drachms

Cinnamon-water 2 fl. oz.

Syrup 1 "

Syrup of bitter-orange peel 1 "

M. A half-teaspoonful one to four times a day.

The syrup of belladonna mentioned in the first formula is made by mixing 15 parts of a tincture (1 in 2) with 185 parts of syrup. The dose is, therefore, somewhat strong of belladonna, and we would suggest that from 1 to 2 drachms (according to the age of the child) of the B.P. tincture to the 4 oz. mixture would give good results.

ANTIPYRIN.

THIS remedy is having a somewhat mixed career. In a recent issue of the *British Medical Journal* we notice that the editor, moralising on sixteen pages about dimethyloxy-chinizin printed in Sajons's "Annual," says, "Undoubtedly antipyrin has proved dangerous, as well as useless, in many instances, although the deaths recorded by the critics of the drug may not all be due to its action, but rather to other circumstances which have not been taken into account. All writers seem to agree that, except in a few remarkable instances, antipyrin reduces temperature; few believe that it has more than a temporary effect." On another page of the same issue we find a note on the use of antipyrin in renal disease and diabetes. In this Mr. M. H. Feeny, M.R.C.S., describes a case of Bright's disease, regarded as hopeless. He ordered 3 grains of antipyrin twice a day, with strict instructions that the action of the heart should be carefully watched. The need for this precaution was quickly demonstrated by the increased irregularity, fainting, &c.; but the dose was diminished to 3 grains daily, and was tolerated, the patient rapidly improving, so that in the space of two months she was convalescent, there remaining but a trace of albumen in the urine. A clergyman of 64, suffering from diabetes, showed the same intolerance to 3-grain doses twice a day, but he did not suffer from the smaller doses, and at the end of three weeks his health had improved, and the quantity of sugar in his urine had diminished to a fourth.

BRITISH AND FOREIGN CONSULS' REPORTS.

CHILI.

The Nitrate Industry. The British consul at Valparaiso, in a recent report on the Chilian nitrate of soda industry, gives some particulars of the combination existing among the manufacturers of nitrate. He says: "After the conclusion of the war (between Peru and Chili) producers had a good time for some years, and this induced increased production till prices began to fall. By 1884 it became clear that a limitation of production was an absolute necessity, and this was carried out with many difficulties and uncertainties, on the principle of a percentage of the possible output of each oficina; consequently each oficina claimed as large an output as possible. The producers, who were strong enough financially to stand a period of losing prices, had to be persuaded to come into the combination by being allowed to produce more than their fair share, and when better times came they made large profits. Naturally this brought in a fresh set of producers, and it is questionable if the combination could have been longer maintained. Fortunately at this junction consumption expanded wonderfully in Europe, and all the producers made money, working as hard as they could. It is, however, to be kept in view that there are two factors, besides the wishes and intentions of producers, which have of late years tended to limit production naturally. In the first place the high price of copper gave full employment to a large number of labourers, and in the second, the want of shipping facilities and the smallness of the shipping ports always check supplies. The first difficulty has been relieved by the breaking-down of the copper syndicate, which has released many miners, and labour in the nitrate districts is now plentiful and cheaper than for a long time previous. The second difficulty will always exist, but matters can, and doubtless will, be improved."

CHINA.

Quicksilver. The imports of quicksilver into the Chinese Empire in 1888 were 2,180 $\frac{3}{4}$ piculs, or about 4,000 bottles.

Drug Exports. The exports of some of the principal drugs from the Chinese treaty ports in 1888 have been:—

—	Star Anise	Camphor	Musk	Galls	Ess. Oils	Rhubarb
Piculs	6 532	3,893	27 $\frac{1}{2}$	31,201	2,346	4,265
Value, H. taels ..	80,392	33,631	221,473	310,372	20,475	167,528

The Camphor Trade of Formosa. Camphor is gathered in the interior of the island of Formosa by Chinese Government employes, and then is taken over at the town of Tawatutia by a Cantonese contractor at the rate of \$12 per picul of 133 $\frac{1}{2}$ lbs. The work of collecting is done partly by civilians and partly by soldiers, and without military protection to the workmen from the attacks of the savages little collecting could be done in the wilder and more productive regions. Hence, when the soldiers have to be drawn away on more pressing duties the work amongst the camphor trees is stopped. In 1888 troubles with the aborigines in two different parts of the island having occupied all the available troops deprived the contractor of the handsome profits he would have made had he received the usual supplies when Formosa camphor in the Hong Kong market rose to \$30 per picul. When the new contractor took over the work at the end of 1887 he introduced strong cases with thick lead linings for the carriage of camphor. But recently it has come forward for shipment in the old large tubs, containing nearly four piculs, while the cases contained less than one. It is also said that since the trade became a Government monopoly camphor has gained in purity by the exclusion of the gum of a species of rattan creeper with which it was adulterated before.

Opium. With regard to the falling off of the imports of opium into China, our consul at Chin Kiang states: "The prospects for the present year point to a con-

siderable further diminution of the import of 1888. In my opinion foreign opium is doomed to become, within a very measurable distance of time, a mere expensive luxury, only used by connoisseurs and the very rich, just as the very choice vintages of France are in Europe.

Packing Goods. Special attention should be paid to packing, as goods are subjected to very rough usage on their way into the interior of China.

Ground Nut Oil. Ground nut oil has made a first appearance as an article of export by steamer from Pakhoi in 1888. Instead of sending it as formerly, in bulk, by junks, a method is gaining favour of packing it in old kerosene tins and shipping it by steamer, which suggests that considerable development may be looked for in the export of this article.

FRENCH COLONIES.

Quicksilver in Algeria. Mining operations for quicksilver were commenced last year in the French colony of Algeria, and resulted in a yield, during the year, of 15 tons metal (ore?), worth 120 $\frac{1}{2}$.

JAPAN.

Drug Imports. Among the articles imported into Yokohama last year (1888) the following were of pharmaceutical interest:—

—	Quantity.	Value.
	Lbs.	£
Western drugs and chemicals..	—	129,914
Eastern " " " "	—	20,941
Aniline dyes " " "	299,789	45,752
Dyes and paints " " "	—	29,013
Indigo " " "	379,484	28,734
Logwood extract " " "	1,641,933	33,669
Condensed milk " " "	—	16,466
Oils and wax " " "	—	20,938
Oil paints " " "	894,120	11,027
Potash " " "	51,658	17,568

MAURITIUS.

Vanilla Exports. The following were the exports of vanilla from Mauritius in the years 1886 and 1887, according to value and weight:—

—	1886		1887	
	Value	Value	Value	Value
	Kilos.	Rupees	Kilos.	Rupees
To France " " "	12,054	208,312	12,496	182,421
To United Kingdom " "	10,604	100,537	5,954	67,888
To Other Countries " "	234	3,200	51	530
Total " " "	22,792	312,049	18,501	250,839

PERU.

Drug Exports. The value of coca leaves exported from Peru in 1888 is returned at 369,361 soles, which represents about 730,000 lbs., the price ranging locally from 25 to 30 soles per 50 kilos. The exports of the so-called "crude cocaine" are placed at about 100,000 soles.

DUTCH COLONIES.

I am sure, says the British Consul at Paramaribo (Surinam) that in all branches of industry British merchants and manufacturers would gain in this colony if they really tried to push their wares, instead of waiting for orders to reach them through consular officers, who cannot assist them, as in no case can a consul push the interests of one of his countrymen to the detriment of others competing in the same line.

During the past year two English commercial travellers visited this town, and both spoke well to me of their success: the one found it to his advantage to postpone his departure by nearly a fortnight; the other told me he had been able to open up four or five promising fresh accounts.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., October 24.

THE general view is that business has been of a much more restricted character, and that the drug and chemical markets generally have been much quieter this week than last. In drugs there are but few alterations of any importance to record. Camphor is very considerably dearer, castor oil is also quoted a shade higher again for the finest qualities, while musk has almost recovered the decline of the last auction sales, and scammony roots (and consequently the English-made resin) have advanced about 50 per cent., or more. The cinchona auctions on Tuesday resulted in some slight decline in value; cascara sagrada is in a somewhat uncertain position, and HGH peppermint and sweet-almond oil may be bought more advantageously. As regards chemicals, we have to record a further advance in chlorate of potash and cream of tartar. Tartaric acid also shows signs of improvement, and the price for refined camphor has been put up. But mercurials are all 1*d.* per lb. lower; quicksilver and quinine are dull and easier, and the price of synthetically made carbolic acid has been somewhat reduced. Turning to "outside" articles we find that soda ash, China galls, cotton-seed oil, rape oil are firmer, while, on the other hand, ordinary East Indian gum arabics, gambier, gum olibanum, shellac, sulphate of ammonia, and ordinary Spanish indigo are lower in price.

THE PROPOSED CINCHONA SYNDICATE seems to occupy a good deal of attention in planting circles in Ceylon, and some people are apparently under the honest impression that it is going to be a success. In the meantime the planters rather illogically grumble that the syndicate promoters propose to charge a higher rate for baling and storage than has hitherto been paid, and one enterprising firm of shippers in Colombo announce that they will continue to charge lower baling and shipping rates and give greater money facilities than any offered by the syndicate. The estimates for the Ceylon cinchona shipments during the season just commenced are only 6,000,000 lbs., but it should not be forgotten that previous estimates have usually been very largely exceeded by the actual exports. A Java planter, who has just made the tour of Ceylon, thinks that, save on the Cannaverella estate, and perhaps in the Uva districts, there are practically no large expanses of cinchona culture left in Ceylon, and that in another four or five seasons the Ceylon cinchona production will have dwindled to insignificant figures. The Cannaverella estate he thinks a remarkably fine one, but he adds that in Java there are between 25,000 and 30,000 acres like it, containing vast numbers of rich *Ledger* trees, of which Ceylon has but few.

THE important chemical works of Hell & Sthamer at Billwärder, near Hamburg, have been bought up by the Hamburger Dynamit Gesellschaft. The Billwärder factory is the oldest saltpetre refinery in Germany, and employs about 300 hands. Its annual capacity of production amounted to 10,000 tons of refined saltpetre, about 9,000 tons of raw salts, about 3,500 tons of refined borax, 10,000 tons of boracic acid, 200 tons of refined camphor, about 100 tons of liquid carbolic acid, and smaller quantities of resublimed iodine and glauber salts.

THE RUSSIAN CUSTOMS TARIFF for drugs and chemicals is about to be revised in a manner which will render the importation of certain articles almost impossible. On this occasion the move appears to be made especially with the idea of injuring Germany. The duty on ether, collodium,

salicylic acid, and chloroform is to be raised from 6 roubles to 15 roubles, on sulphuric acid from 22 kopecks to 30 kopecks, on tartar emetic from 26 kopecks to 4 roubles (about 400 per cent.), stearin and similar fats from 1.20 to 2 roubles, borax and boracic acid from 11 kopecks to 240 kopecks per pood. These are but a few examples of an increase which extends over the whole of the drug and chemical branches. The pood is equal to 36 lbs., and the gold rouble (in which duties are payable) to 3*s.* 2*d.*

THE GERMAN EXPORT TRADE.—A report on the export trade of the German Empire for the first half of the current year shows a material decline in the export of all German textiles, and a still more serious decrease in iron goods, especially rails, wire, and pig iron, which between 1886 and 1888 declined nearly a half, and the first half of 1889 recovered only slightly. The latter seems to be affected most unfavourably by the tariff policy and "rings." In machinery, the export of locomotives and engines falls considerably short of 1886 as well as of 1888, while the export of other machinery also is less than 1888. Copper goods have constantly declined; lead and zinc have also decreased. The trade in chemicals is still favourable, especially tar colours and chloride of potash, and aniline dyes improve slowly. In sundry articles, which up to last year showed a steady advance, a great decrease is noticeable in 1889—such as glassware, leather, and leather goods. There are also decreases in the exports of alcohol, spirits, beer, and paper, while there is an increase in sugar. The total result is a certain stagnation in the export of industrial products, which in 1883 amounted to 2,337 million marks, and in 1888 to only 2,369 million, and a notable decrease in the last half year. In raw materials there is a steady decrease from 958 million marks in 1880 to 932 million in 1883 and 834 million in 1888.

ACID (CARBOLIC).—English crystals in bottles are quoted at 1*s.* 3*d.* per lb. and in bulk (large packages) at 11½*d.* per lb., while best quality liquid may be had at 10*d.* per gallon. The makers of the German synthetically-made carbolic acid have just reduced their price for it to 1*s.* 8*d.* to 1*s.* 9*d.* per lb. for loose crystals (42°), while the liquid acid has been lowered proportionately still more—viz., to 1*s.* 7½*d.* to 1*s.* 8½*d.* per lb., according to quality. But even the present prices are still so much above those of the coal-tar acid that the makers of the latter have little to fear from the competition.

ACID (CITRIC).—This article is fairly steady at 1*s.* 3½*d.* per lb. with buyers.

ACID (TARTARIC).—The feeling is rather firmer, and a telegram from Messina to-day announces an advance of about 10 per cent. in the quotations for lees and argols. This advance is expected to be followed in the Naples district. On our market tartaric is quoted at 1*s.* 2½*d.* for English on the spot, but 1*s.* 3*d.* is asked for forward delivery. Foreign brands are held at 1*s.* 2½*d.* to 1*s.* 2½*d.* per lb.

ALOES.—This week's Cape steamer has brought only 16 cases.

AMMONIA SALTS.—Carbonate steady at 3½*d.* per lb.; *Sulphate* firmly held at 36*s.* for first and 34*s.* per cwt. for second quality; *Sulphate* quiet at 11*l.* 15*s.* to 11*l.* 17*s.* 6*d.* for Beckton's; London, Hull, and Leith, 11*l.* 16*s.* 3*d.*

ANTIMONY.—*Regulus* very firm and dearer for forward, 70*l.* for November-December. *Crude Japanese* scarce, and more or less nominal in price; 39*l.* has been refused, and from 41*l.* to 41*l.* 10*s.* is the nearest quotation.

ARSENIC firmly held at 13*s.* 3*d.* to 13*s.* 6*d.* per cwt. for best white powder in kegs.

BENZOLE is not very brisk at present, at 3*s.* 2*d.* for 90 per cent. and 2*s.* 2*d.* to 2*s.* 3*d.* for 50 per cent., but there are indications that prices may be tighter later on.

BLEACHING POWDER.—The feeling has been somewhat less active, and the quotation is now 7*s.* 9*d.* ex warehouse here, and 6*s.* 7½*d.* to 7*s.* on the Tyne.

BORAX steady at 30*s.* per cwt. from the makers and 28*s.* 6*d.* in second hands.

CALABAR BEANS changed hands at the rate of 8*d.* per lb. for a small quantity some days ago.

CAMPBOR (RAW).—There has been a pretty considerable trade in this article since our last report, about 370 to 400 tubs Japan having changed hands on the spot at 110*s.* per cwt., and we hear that to-day even as much as 120*s.* has been paid for a small lot. For arrival there has also been a good business, say about 500 packages at 106*s.*, rising to 107*s.* 6*d.* per cwt., "c.i.f." terms delivered weights, for September-December shipment. We believe there are still sellers at 107*s.* 6*d.* "c.i.f." for far-off shipment. According to the latest mail news, the Hong Kong market was very firm with a small stock of only about 100 piculs.

CAMPBOR (REFINED).—On October 21 the English refiners again raised their quotations by 1*d.* per lb., bells being now quoted at 1*s.* 5½*d.* to 1*s.* 5*d.* per lb. (the latter figure for 1-ton lots), and *flowers* at 1*s.* 4*d.* per lb. Small tablets have also advanced in price proportionately. The foreign makers are very full of orders for delivery. Their agents here quote equal to about 1*s.* 4*d.* per lb., usual English terms.

CANTHARIDES.—On Friday last 7 cases good *China* cantharides were bought in at 1*s.* 2*d.* per lb., but one case sold at 10*d.* per lb., which is about the present market value.

CASCARA SAGRADA.—For spot stuff various prices are quoted. Some holders offer nothing below 75*s.*, and are rather inclined to ask 77*s.* 6*d.*, but others say that 72*s.* 6*d.* will still buy. Our New York cablegram received to-day announces a decline in the prices there.

CINCHONA.—Tuesday's bark sales were exceptionally heavy, the catalogues consisting of:—

	Packages	Packages
Ceylon bark	3,299 of which	1,866 were sold
East Indian bark ..	325 "	187 "
Java bark	159 "	159 "
South American bark	2,251 "	151 "
Total	6,034 "	2,363 "

A number of bark owners, who had kept back until the market should show some decided signs of improvement, now took the opportunity to bring forward heavy supplies, which would have been far greater still but for the policy of certain brokers to systematically advise their principals to hold aloof yet awhile. Moreover, nearly one-third of the sales on this occasion consisted of old *Cuprea* bark, which is always brought forward as soon as the slightest improvement is manifested in the market, but which it would not be right to count as if it were Ceylon or Indian bark. The principal holders did not seem at all anxious to meet the market, and large piles of bark were bought in, the limits being frequently 50 per cent. or more above the market value. In fact, as will be seen from the table below, not quite one-half of the total weight of bark was disposed of. There was very little competition at first, and prices gave way immediately upon the commencement of the auctions, the decline averaging 5 per cent., and on low barks sometimes double that. But as the auctions proceeded, though bidding never became very brisk, much of the decline was recovered, and in the opinion of some of the most experienced followers of the sales the last parcels sold almost up to the average of the previous auction. The unit value was irregular, and ranged, we should think, between 1½*d.* and 1¾*d.* per lb. The assortment of bark offered was not by any means so good as that shown at the preceding auctions. There was an unusually large proportion of root bark, mostly from Ceylon.

The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works ..	243,273
" the American, French, and Italian works ..	121,201
" the Frankfort o.M. and Stuttgart works ..	75,840
" the Auerbach factory	69,290
Messrs. Howards & Sons	52,502
Agents for the Brunswick factory	24,099
Mr. Thos. Whiffen	1,647
Sundry druggists, &c.	48,946
Total quantity sold	636,798
Bought in or withdrawn	651,023
Total amount of bark catalogued	1,287,821

It should be well understood that the mere weight of bark purchased affords no guide whatever to the quinine yield represented by it, firms who buy a small quantity of bark by weight frequently taking the richest lots, and *vice versa*. An analysis of the catalogues gives the following prices for sound bark:—

CEYLON BARK.—*Original*: Red varieties, of which nearly half the bark sold consisted: chips, dull and small to fair branchy, 1½*d.* to 3*d.*; fair to fine quilly stem chips, 2*d.* to 5½*d.*; spoke shavings, fair but dull or weak mixed, 2½*d.* to 3*d.*; good bright and bold, 3½*d.* to 4½*d.* per lb. Thin weak damaged druggists' quill, 3*d.* to 3½*d.*; fair silvery but weak, 5*d.*; common dust, 1½*d.*; root (several lots), dark and very dusty to good bold, 1½*d.* to 4*d.* per lb. Yellow varieties (not largely represented): dull to fine strong branch chips, 2*d.* to 6*d.*; root, 4*d.* to 4½*d.* Grey varieties: dust and fair siftings, 1*d.* to 2*d.*; thin and weak to fairly bright chips, 2*d.* to 4*d.*; fine strong branchy ditto, 4½*d.* to 6½*d.* per lb. Good bright spoke shavings, 3*d.* to 4½*d.*; good bold mixed to fine rich root, 4*d.* to 9*d.* per lb. *Renewed*: red varieties, dull weak to fair chips, 2½*d.* to 4½*d.*; good bright ditto, 5½*d.* to 6*d.*; fair to good strong spoke shavings, 3½*d.* to 7½*d.*; small dusty siftings, 5½*d.*; yellow chips, 4*d.*; grey fine bold stem chips, 5½*d.* to 9*d.*; dusty and weak stem chips, 2½*d.* to 4*d.*; good to fine spoke shavings, 6½*d.* to 8½*d.*; fine chips, 9*d.* refused.

EAST INDIAN BARK.—*Original* red varieties, ordinary woody to fair chips, 2½*d.* to 3*d.*; good branchy chips, 3½*d.* to 4*d.*; good bright spoke shavings, 3½*d.* to 4½*d.* per lb.; yellow fine bright spoke shavings, 5*d.*; ditto chips, 7*d.* per lb. Grey good bright branchy chips, 4*d.* to 5*d.* Hybrid spoke shavings, 2½*d.* to 4½*d.*; dull chips, 2½*d.* per lb. *Renewed*: fair to fine red stem chips, 4*d.* to 8½*d.*; shavings, 7½*d.* to 8*d.*; grey fine bright chips, 5½*d.*; bold rich spoke shavings, 9½*d.*; Hybrid spoke shavings, 9*d.* per lb.

JAVA BARK.—*Original*: red chips, rather ordinary, 2*d.* to 4*d.*; root, 2½*d.* per lb. Yellow dusty root, 5*d.*; dust, 1*d.*; fine stem chips, 6*d.*; quill mixed ditto, 6½*d.* per lb.

SOUTH AMERICAN BARK.—Of 413 packages cultivated Bolivian *Calisaya* 132 sold at 4½*d.* for very small broken and weak, and 7*d.* up to 10*d.* for fair to good strong silvery, the total weight of these being 24,750 lbs. The bulk, however, is held for higher prices. 125 packages very bold but common dark and damaged *Carthagenæ* are held at 7*d.* per lb. Of 1,513 packages old *Cuprea* only a few sold for 2½*d.* for common, while for better lots 4½*d.* to 4¾*d.* was refused; 90 packages *Hard Pitayo* and 107 *Soft Columbian* were all bought in. Our imports from all parts since our last report amount to 1,043 packages.

CHAMOMILES.—Belgian flowers are steady, but prices have not quotably changed since last week.

COCAINE.—The general quotation is still 15*s.* per oz. for quantities, but we hear it reported that there are lower offers in the market.

COPPER (SULPHATE) firmly held at 23*l.* on the spot.

CREAM OF TARTAR is again dearer, best first French crystals closing at 93*s.* 6*d.* to 94*s.* per cwt.

CUTCH.—Steady, with sales of good *Star B* at 27*s.* per cwt., landed terms, for parcels now afloat, and 27*s.* 9*d.* on the spot. At auction a few lots of the *Bull* mark sold at 25*s.* 6*d.* per cwt., and business is reported in *Double Eagle* at 28*s.* 6*d.* per cwt.

GALLS.—For arrival there has been another advance of 1*s.* per cwt. in the price of *Chinese* galls, business being reported at 62*s.* per cwt. "c.i.f." Continental port. *Turkey* galls selling steadily at 55*s.* for blues, and 45*s.* per cwt. for fair white.

GAMBIER.—At the drysaltery auctions on Tuesday 573 bales block sold without reserve at a decline of 2*s.* per cwt., the bulk at 27*s.* 9*d.* per cwt. For arrival a pretty big business has also been done at 1*s.* to 1*s.* 3*d.* per cwt. decline, but to-day about 3*d.* of this has been recovered again, the closing transactions having been at 26*s.* 6*d.* to 26*s.* 9*d.* for September-October, 26*s.* 3*d.* for October-November, and 26*s.* 6*d.* for October-December.

GLYCERINE.—The market is dull and quiet for double distilled, and there are no reliable quotations owing to the absence of business. From 62*l.* to 63*l.* is asked, but it is

quite possible that for large contracts lower rates might be accepted.

GUINEA GRAINS.—The last business reported from Liverpool was at the rate of 28s. for fair quality.

GUM ARABIC.—The auctions to-day were very large, over 4,000 packages of various gums being offered, the bulk consisting of East Indian descriptions. Prices were generally lower, the decline ranging from 2s. to 4s. on *Ghatti*, and 3s. to 6s. on *Amrads*. *Aden* sorts are in good demand for fine qualities, but ordinary *Aden* gums are obtainable at lower rates. There was a good assortment of *Mogadore* gums, including about 30 casks of exceptionally fine white *Mogadore*, much better in quality than what has been usually received from that quarter, and almost resembling Turkey gum. These were bought in at nominal rates. *Cape* gums sold at 5l. to 7l. 5s. for good to fine soft ambery sorts, and 35s. for ordinary glassy brown. Fair to fine *Aden* sorts, 63s. to 75s.; low drossy, down to 18s. 6d. per cwt. Of East Indian gums, common red *Amrad* brought 36s. to 40s.; good ambery drop, up to 56s. per cwt.; fine small pale *Kurrahee*, 70s.; *Ghatti*, good bold to fine pale, 48s. 6d. to 70s. 6d.; and common, down to 90s. per cwt. Over 400 packages of low insoluble *Persian* gum, imported *via* Bushire, were included in the sales. From Liverpool a better business in *Brazilian* gums is reported.

GUM ELEMI.—Two cases good pale Manila, somewhat dirty mixed, sold at 37s. 6d. per cwt. last Friday.

GUM OLIBANUM.—Cheaper rates prevailed to-day, and of the 438 packages offered at auction part sold; fine pale drop at 59s.; ordinary blocky mixed ditto at 28s. 6d. to 29s.

HONEY.—*Californian* in improved demand in Liverpool, 50s. per cwt. having been paid for fine quality. From Chili consignments are still coming in freely.

INDIGO.—On Tuesday 424 serons Guatemala indigo were offered for sale by auction, and sold at a decline, as compared with the preceding sales, of about 2d. per lb. on common and medium qualities, of which the whole of the supply at auction consisted. 347 serons were disposed of at 3s. 2d. to 4s. for ordinary to medium. Sobres, 2s. 10d. to 3s. 7d. for good ordinary to medium Cortes, and 1s. 10d. to 2s. 9d. for very low to ordinary ditto.

INSECT FLOWERS.—The present quotations for Dalmatian flowers are:—Open, 82s.; half-open, 100s.; closed, 120s. per cwt., "c.i.f." terms.

IODINE.—The price of the crude iodine is maintained at 9d. per oz., and the iodides are also unaltered. *Iodide of potassium*, 11s. 6d. to 11s. 9d. per lb.

MERCURIALS.—On September 21 the prices of mercurials, which had been shaky for some time, were officially reduced by 1d. per lb., and now stand at 3s. 6d. for *Calomet*, 3s. 9d. for *Red*, and 3s. 8d. for *White precipitate*, 2s. 10d. for *Corrosive sublimate*, and the others in proportion.

MUSK.—There has been a very good demand privately, and prices show a considerable recovery from the point touched at the last auctions. Fine first-pile *Tonquin* musk, old-fashioned shape, well trimmed, has realised 80s., and thin blue-skinned pods 87s. 6d.; in fact, it is said that 90s. per oz. has already been paid for the latter.

OIL (ALMONDS).—The raw material has been coming forward more freely and at lower prices lately, and manufacturers have thus been able to lower their quotations from 1s. 6d. to 1s. 4d. per lb. for the sweet expressed oil, but the essential oil has not been affected yet by the reduction.

OIL (CASTOR).—The price of finest *Italian* castor oil is still advancing, and there is very little to be had now; best tasteless medicinal is quoted at 5½d. *French* medicinal at 4½d. to 5d., and ordinary *French* at 4d. per lb., all London terms. In Liverpool also the position remains exceedingly firm, with further sales of good *Calcutta* seconds, spot at 4½d., and to arrive, August-October shipment at 3½d. per lb. On October 1 the *Calcutta* market was exceedingly firm, with a good demand for England and Australia.

OIL (COD-LIVER).—The demand is improving, though prices still remain very low (about 70s. for the best non-congealing oil), but there is plenty of stock.

OILS (ESSENTIAL).—*Star-anise* steady at 6s. 1d. per lb. on the spot, while for forward delivery more money is being asked. *Cassia* quiet, but firm, at 3s. 6d. per lb. spot asked; forward also strong. *Citronella* fairly steady at last week's quotations; while for *Lemongrass* oil 1½d. per oz. was recently paid. American *Peppermint* oil is rather easier here, with sellers at 11s. 3d. per lb. on the spot to-day, but Japanese oil is very firmly held at 3s. 9d. to 4s. per lb. for good quality, a price which seems to deserve attention. As regards French essential oils, there has been a very strong demand for *Lavender* oil, and the sales are heavy, but the crop has also been a rich one, and of exceptionally good quality. Of *Thyme* oil very little has been produced this year, the weather having been too dry for the success of this plant, which requires moisture, and if any special demand should arise prices are very likely to advance, as there is but a small stock. With regard to *Spike* oil, the crop has been good this year, but the demand has fully kept pace with it. Last season, when the lavender turned out so badly, there was an exceptional run on spike oil as a substitute for the lower grades of lavender, and the buyers ran out of stock. They have consequently been somewhat more anxious to provide themselves with a supply this year.

OILS (FIXED).—*Cocanut* quiet at 24l. to 24l. 15s. for Ceylon, 27l. for Cochin, and 24l. 10s. to 24l. 15s. for Mauritius oil. *Cotton seed* firm and in demand; crude on the spot, 20s. to 21s.; refined, 23s. 3d. to 23s. 6d.; at Liverpool refined oil is quiet at 23s. 3d. to 24s. 3d. *Ground-nut oil* very scarce and firm. *Linseed oil*: Spot, 20s. 10½d. to 21s. 1½d.; barrels, 21s. 3d., the latter being again in good demand. *Olive oil* steady; Spanish at 36l., Sicilian also 36l.; *Mogadore*, 34l. 10s. to 35l. In Naples and Sicily the markets are tending upwards. *Palm* oil very quiet at 26s. 6d. for fine Lagos. *Petroleum* firm. American spot, 5½d.; November-December, 5½d. to 5½d.; December, 5½d.; Russian spot and November-December, 5½d. *Rape oil*, dearer at 29s. 3d. to 29s. 6d. for brown on the spot; refined, 30s. 9d. There is very little offering. *Turpentine* steady; American, 36s. 3d. to 36s. 6d. per cwt.

OPIMUM.—A Smyrna report, dated October 12, which we give for what it is worth, runs as follows:—"The unforeseen reserve of the buyers has ended in discouraging the stock-holders, who have given up all idea of a rise, and who have sold to the buyers for the Dutch Government Karahissar examined at 10s. 1d., and to the buyers for London and America a few baskets only of old talequale at 9s. 1d. The eagerness of the buyers has caused the price of Karahissar examined to rise gradually to 12s. 3d., but the transaction at this price was annulled on account of the exactions of the buyer. The animation which was the consequence of these purchases induced the stock-holders to raise their prices also for the talequale, but in presence of the buyers' reserve they were obliged to make fresh concessions, and this brought about some rather important transactions in the course of last week, when 183 baskets changed hands at 11s. 2d. for examined, and 9s. 3d. for talequale Karahissar. This week business has been more limited, on account of the Jewish holidays. The sales amount to about 60 baskets, partly intended for the United States, where little by little the prices have come to the same level as those of Smyrna the great Philadelphia factory has also made some purchases in Smyrna. The most curious thing in the present situation is that the buyers began to operate just at the moment when the sellers were about to agree to appreciable concessions; but since the purchases made for the United States the tendency is firmer, and a panic is no longer to be feared. It has not rained for more than three months, and if it does not rain within two or three weeks the sowing for the next crop can only be effected in a manner altogether unfavourable. The stock is 1,800 baskets. Arrivals to date 1,359 baskets, against 2,814 last year at a similar period." The London market has been exceptionally quiet this week, and there is scarcely any business to report, although for *Persian* opium somewhat more money is asked, 13s. 6d. per lb. for ordinary qualities.

POTASH SALTS.—*Bichromate* remains steady at 4d. per lb. with some buyers. *Chlorate* dearer again, at 5d. on the spot, while for forward delivery 5½d. per lb. is talked of. *Prussiate*, at 7d. to 7½d. per lb., according to brand and quality for yellow.

QUICKSILVER has remained quiet this week at 9*l*. 5*s*. from the importers and 8*l*. 18*s*. for second hands.

QUININE.—There has not been very much animation in the market this week, although sales aggregating about 90,000 to 100,000 oz. are reported for the week, mostly in second hands, at 1*s*. 2½*d*. for *Whiffen's* brand on the spot, 1*s*. 2½*d*. to 1*s*. 2¾*d*. for German brands spot, and 1*s*. 3*d*. ditto for delivery as far forward as March next year. To-day second-hand stuff offers at 1*s*. 2¼*d*. for December, and 1*s*. 3*d*. for January, but there are no buyers. Spot is said to be obtainable at 1*s*. 2½*d*., or perhaps even at 1*s*. 2*d*. per oz. On the other hand the B & S. agents report that their makers have declined an offer of 1*s*. 3*d*. for January-February delivery. The market is dull and weak.

RHUBARB.—Our imports this week are 130 cases. The *Rohilla*, which has just arrived, also brings 132 cases in transit from Shanghai.

SAFFRON.—The new crop is expected to come in at the rate of about 60*s*. per lb. for finest Valencia.

SCAMMONY.—Roots have advanced very considerably in price recently, and whereas a few weeks ago 25*s*. was still a quotation, the owners of the small stock now talk of 50*s*. to 60*s*. per cwt. The English-made resin has correspondingly advanced. For Turkish scammony 30*s*. is still asked for the best quality; sales of fair quality have been made at 28*s*. per lb.

SENNA.—Our imports for the week amount to 663 bales. On Friday last the remainder of the large supply at auction was sold at the same rates as the previous day's supplies.

SHELLAC.—The market has been weak and quiet, with prices tending lower all along. For the auctions on Tuesday over 1,100 cases were at first advertised, but only 719 were actually catalogued. Holders being free sellers nearly 600 cases were sold at a decline of 3*s*. for ordinary, and 2*s*. for good second orange, and 1*s*. to 2*s*. for button, but almost steady for garnet lac. Good strong *Second orange* brought 75*s*. to 76*s*.; reddish to fair, 72*s*. to 73*s*.; livery and dull, 70*s*. to 71*s*. *Garnet*, good free AC, 63*s*. to 64*s*.; cakey, 60*s*. to 61*s*. *Button*, fair seconds to ordinary firsts, 90*s*. to 95*s*. per cwt. Privately 105*s*. has been paid for fine bright V.S.O. first orange. At to-day's call the following prices were made:—

		Oct.	Nov.	Dec.	Jan.	Feb.
TN Orange, sellers	..	75/	75/6	300 at	77/	78/
" buyers	..	73/	74/	76/	76/	76/
AC Garnet, sellers	..	65/	65/	66/	—	—
" buyers	..	62/	63/	64/	—	—

Calcutta mail reports say that at the end of last month there was a very large speculative inquiry, and practically all the better brands are in second-hands.

SODA SALTS.—*Ash* has advanced to 1*l*. net on the Tyne, and 1½*l*. in London. *Bicarbonate* in very good demand at 5*l*. 10*s*. ex warehouse. For early delivery higher prices are asked. *Crystals* very firmly held and in good demand. Spot, 56*s*. to 57*s*. 6*d*. ex ship London and on the Tyne, 46*s*. 6*d*. to 47*s*. 6*d*. *Caustic* firm at 7*l*. 12*s*. 6*d*. for 60-per-cent. white landed. *Nitrate*, 8*l*. 7*s*. 6*d*. to 8*l*. 10*s*., according to quality.

TEA.—The China market is somewhat dull and prices slightly easier, in consequence of large supplies on top of the recent advance. Commonest leaf tea fetches 4½*d*. per lb., while fair second crop Moning, from 5½*d*. to 6½*d*., shows fully ¼*d*. per lb. decline. There was a large quantity of this grade sold on Tuesday and Wednesday, but the trade takes them freely at the current reduction, realising that they show far better value than anything to be bought in other kinds of tea, and the high prices of Indian and Ceylon will send them readily enough into consumption. Panyongs and Chingwos continue to show good value, and finer grades will probably be hard to match at present prices in a few months' time. Scented Capers are very firm, and there is very little, if anything, to be bought under 6*d*. per lb. Assams remain very firm for all teas under 10*d*., especially for lowest grades. Retailers are, however, holding off as long as ever they can, and with a large amount of tea on the water, great caution in buying is advisable. Ceylons show as yet no signs of coming to reason. A few months ago they were driving 6*d*. and 7*d*. Congous out of consumption, and now China teas under 1*s*. are taking the place of Ceylons. If this goes on

much longer, and the trade again becomes accustomed to China teas, and realises their usefulness, as compared with Ceylons at these prices, we may look for firmness in Chinas and a sudden and heavy fall when large supplies of Ceylon again come on a market which will not be ready to take them.

WAX (JAPAN) remains very cheap. At the drug sales last Friday 11 cases good palish squarts sold at 45*s*. per cwt.

THE AMERICAN MARKETS.

(Cablegram from our Correspondent.)

NEW YORK: Thursday evening.

BALSAM COPAIBA.—All varieties of copaiba are on move upward, higher prices being quoted in each instance.

CASCARA SAGRADA.—The market has declined, and there are sellers to-day of good genuine bark at 70*s*. per cwt., "c.i.f.," London terms.

GOLDEN SEAL ROOT can be bought cheaper, and 1*s*. 5*d*. per lb., "c.i.f.," London terms, would certainly be accepted.

OIL OF PEPPERMINT.—Our market is firm, and owners will not part below 10*s*. 9*d*. per lb., "c.i.f." terms, for H.G.H. oil.

QUININE.—The price for German brands in bulk has declined to the parity of 1*s*. 3*d*. per oz.

SENEGA ROOT is held for more money, 1*s*. 9*d*. per lb. "c.i.f." being wanted for good bright root, and the market shows signs of further improvement.

IODINE.

MR. GREENHOUGH DROPS A FEW HINTS AND REMINISCENCES.

IT was our duty last week, in our Trade Report, to refer to the offering for sale at the drug auctions of 15 kegs of iodine, and also to give publicity to the rumour that another parcel of over 40 kegs, which had just arrived, belonged to the same owner, who had created some disturbance in the trade by offering independently of the iodine ring. These statements have proved somewhat disagreeable to the official iodinists, and on Monday last our editorial office was brightened by the genial appearance of Mr. D. W. Greenhough, who called, as he expressed it, to "set us right" in the matter.

"To begin with," said the representative of the iodine "ring," "I would ask you to deny, point blank, the rumour that any offer was made at the auctions for the 15 kegs of iodine, or any part of them, on behalf of the 'ring.' There was no need for such an offer, because the stuff had already passed into the hands of other parties by private treaty one or two days before the auction."

"Very well, Mr. Greenhough; but undoubtedly an offer of 7*d*. was made for the iodine at the sales, and, as we correctly reported, people generally said that was done on behalf of your syndicate."

"But you can deny that on my authority. I had first thought of writing to you in that sense, but upon talking the matter over with Anthony Gibbs & Co., and others, and as I just happened to be passing, I thought I might as well look in personally. As regards people talking about the syndicate, they talk about all sorts of things they don't know anything of; for instance, they say that this iodine has been sent over by Colonel North to 'bust us up,' whereas, in point of fact, Colonel North is one of our strongest supporters. He backs up the 'ring' heart and soul. No; the stuff which was sold some months ago, and again these 15 barrels, belonged to a South American who had left the nitrate business, and who thought he was going to make a fine thing out of this iodine by selling it outside the combination. I found out to whom the lots belonged by personally going down and inspecting the kegs. You know that these kegs generally come over here packed in hides, and frequently they are given a few coats of paint outside around the keg to preserve the iodine from evaporation. Some people just

daub them with tar. But certain marks, which it would not be worth while to enumerate, revealed the identity of the parcels. Then, as to the forty odd other kegs to which you refer, they belong to the Syndicate and were imported by them, and the outsider who has created all this trouble is now quite cleared out."

"I suppose in that case you will feel considerably relieved," our man interpolated.

"It don't make much difference. You see, the only salvation of the business is in the syndicate. We are perfectly well organised as regards the manufacturers, and it would pay no one to try to break up the syndicate, which secures a fair profit all round. Then, as regards the large manufacturers of iodides here and abroad, they are well secured, for, as you have already stated on one occasion, we guarantee them that in any sudden drop of price they shall be refunded the difference on any purchases they may have made within a month of the time; but even here we are not particular about a week or so. Of course, on their side, these favoured people bind themselves never to bid for any outside lots in sale, or, in fact, to buy from anyone except the combination."

"Then you do not expect any further disturbance in the iodine market just at present?"

"I do not. I think 9d. is not at all an excessive price for the article, and even if it were dearer still, I don't think the consumption would be anything less than it is now. But what stands most in the way of such a rise is that in that case the kelp-gatherers, who do not find their business very profitable now seaweed is worth only 4l. per ton, or thereabouts, would be able to get much more money for the kelp. That would largely stimulate the output of kelp, and might in turn raise difficulties with the European iodine makers. On the other hand, even a reduction of the price to 4d. or 5d. per oz. does not appreciably enhance the employment of iodine, as its use in the arts is really very small, even at that low figure. Another fact which makes the position very strong is that the London stock of iodine is very small at present. Formerly there used to be some 3,000 to 4,000 kegs in stock here, and now there is nothing at all like that number. But of course at the present time London is no longer the only centre, for to save shipping expenses we now also keep stock in Hamburg, New York, and other ports."

"How many people do you think are at present making iodine in South America?"

"I cannot exactly say. Maybe fifty. You should recollect that not all the nitrate makers manufacture iodine. In some parts of the country the nitrate contains no iodine at all, while, again, certain other makers, who would be able to turn it out, are under agreement not to produce any. But there is very little nitrate of soda now shipped which has not been freed from iodine. In fact, while for the lower grades of nitrate, used for manure, the presence of iodine would not be in any way injurious, it would certainly operate against the employment of nitrate in sulphuric or nitric acid manufacture. That reminds me, by the way, of the accidental manner in which the presence of iodine in Chili saltpetre was discovered at a certain chemical works in London some thirty years ago. Some nitrate they were using there for acid-making attracted attention because of its exceptional impurity. The mother-liquor remaining after refining the nitrate was tested and found to give a reaction indicative of iodine. Through this the world was enriched with the discovery of a new source for an immensely useful product. And it is getting time for 'Change now,' said Mr. Greenhough, "so that I must be going."

But we had another question to ask, which, not to put too fine a point upon it, was this: "Will the combination be renewed?"

We rather prepared ourselves for a diplomatic answer to this plain query, but Mr. Greenhough made no bones about it.

"Yes," said he, "in all human probability it will be renewed. It pays everybody too well to drop it. But there is of course always an element of uncertainty. For instance, just before the last disturbance occurred, in the beginning of September, we were agreed to reduce the price even below 4d. per oz., at which it then stood, and our only doubt was whether it should be a halfpenny or a three farthing drop, when suddenly the news came from South America that

everything was settled again, and so we put the price back to 9d. per oz. instead of reducing it, a circumstance for which we had certainly been quite unprepared ourselves. But as it was I had sold a very large quantity at the lowest price, 4d. per oz."

"How much?"

"Well, certainly not less than 1,000 kegs."

And Mr. Greenhough departed, leaving us more than ever convinced of the truth that the "World's marcies are fairly divided." Fortune's favoured few in the iodine business, who bought these 1,000 kegs for something like 29,000l., and saw the value of their purchase rise in a few days to 67,000l. without either toil or spinning, surely afford a flagrant example of the operation of the unearned increment.

NOTES ON THE ESSENTIAL OIL MARKET.

CAMPHOR OIL.—Light camphor oil, of about 0.900 to 0.915 specific gravity, continues to find a regular and considerable sale, but the price has had to be advanced, owing to the rise of the raw material in Japan and to the increase in the rate of freight; but even the present price is still a very moderate one as compared with the high quotation of oil of turpentine. In Switzerland tests are now being made on a very large scale to employ light camphor oil as a denaturant of alcohol. It will certainly be found quite as useful for that purpose as the Italian oil of rosemary, which is much dearer and rarely occurs pure. Moreover, the adoption of oil of rosemary as a denaturant in other countries as well as in Germany would probably cause the demand for that article to outrun the supply. As regards heavy camphor oil (a body boiling at 240° to 270°, and of 0.970 s.g.), it has been introduced for the most widely different industrial purposes, and is, no doubt, adapted for many technical objects. It is easily miscible with fatty vegetable and also with mineral oils, and is soluble in any proportion in alcohol of 95 per cent. The flavour is pleasantly mild and the colour pale green.

LAVENDER OIL.—All reports agree in describing the result of this year's distillation in Southern France as a favourable one, especially as regards the good medium qualities. The finest oils grown at the highest altitudes excel this year by their particularly mild flavour and the richness of their bouquet, but only moderate quantities have been distilled of this variety. Prices are generally normal.

CLOVE OIL.—It is a remarkable fact that, notwithstanding the present intimacy of diplomatic relations between Germany and Zanzibar, it is never possible to obtain authentic information concerning the position of cloves, which yet form such an important article of commerce. Unfortunately the "futures" business, which has already severely injured legitimate trading in colonial produce, has now also seized upon this spice. In Hamburg there are frequently sellers of cloves for future delivery whose business lies quite outside the article; and it is not impossible that the entire spice trade may come to be dominated by a set of hazard-players, just as is already the case with coffee. Bombay is becoming more and more of importance as a centre for the clove trade. One native firm especially is transacting a very large business in the article, and the port in question will have to be reckoned with in the future.

MESSRS. POTTER & CLARKE, wholesale herb and drug merchants, who have recently removed to large new premises in the City, marked the event by entertaining the heads of their departments at dinner in the Holborn Restaurant on Thursday evening. Twenty sat down to dinner, after which, in responding to the toast of "The Firm," Mr. H. Potter spoke of the recent change, and contrasted it with the position of the firm when he entered it a quarter of a century ago. Then the herb trade was a languishing one; now, through hard work, it is prosperous, his firm employs ten times more hands, and they turn out fully 3,000 packets of herbs per day. Mr. Clarke also spoke, and referred to the good feeling which exists between the firm and their employes. Several other toasts followed, and with music a very pleasant evening was spent.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c. will be attended to in the order received.

Liquid Extract of Senna Pods.

A process lately published by Mr. E. F. Salmon consists in double maceration and subsequent evaporation. Prolonged heating is usually considered injurious to senna, and the evaporation of 9 pints of liquid to 13 fl. oz. is, at any rate, tedious. An active and elegant preparation may readily be made on the lines of Dr. Symes's "extraction by pressure" process, as follows:—

Take of

Senna pods	..	..	..	..	1 lb.
Rectified spirit	..	..	..	..	3iv.
Water	..	..	..	..	3xij.

Macerate 24 hours, express strongly, and add to the marc, mixing thoroughly,

Rectified spirit	..	..	..	..	3ij.
Water	..	..	..	..	3vj.

Again macerate 24 hours, express, and after some hours filter and add Water to produce.. .. 3xvj.

Dose: 3ss. to 3ij.

Spalding, October 19. E. WIGHTMAN BELL, F.C.S.

Window Dressing.

SIR,—We have a good deal said about window dressing. The plan I have adopted is to use my window to produce an impression of something definite and distinct, rather than something pretty and varied. One half is filled with trusses and chest-protectors, the other with dental notices. For a change I thought of getting a plaster model of a man, fit him up with truss, elastic stocking, chest-protector, &c. Can anyone tell me where best to purchase such, and how to proceed?

Yours truly,

MIDS. (156/30.)

Examination Schedules.

SIR,—About twelve months ago I wrote you upon the above subject, remarking that the present syllabus which is issued to students is absolutely insufficient to state the precise requirements of the examiners. I was given to understand at that time that the subject of revising the present syllabus was "in committee." It seems to me high time that it was out of committee, and that students were in possession of a more practical and honest statement of what is required of them. A sentence, for instance, in the Major syllabus, which amuses me immensely is this: "An elementary knowledge of the properties of light, heat, electricity, and magnetism is also required." There may be many different opinions as to what is meant by the word "elementary," but my experience is (and I presume to think that I know something about physics) that the questions put to Major candidates in this branch of their examination cannot be classed as elementary. Another illustration: In the paragraph on chemistry it is stated that candidates must be acquainted with the "volumetric estimation," &c. Well, occasionally we hear of students having gravimetric estimations to work out. In the Minor syllabus, too, one meets with similar misleading statements. I am not finding any fault whatever with either advanced physics or gravimetric

analysis, or, indeed, any other thing which is conducted in the examinations; I merely point to the injustice which such an incomplete and dishonest syllabus as we have at present exhibits.

I have no sympathy with students who are anxious to know just so much and no more, but I rather support those who are desirous of getting entirely beyond their work, and thereby ensuring success. Still, in the interests of those who have yet to go through the mill, I contend that our examination syllabus should be frank and fair, like those issued by most other examining boards, and that no room should be left for complaint.

Yours faithfully,

October 22.

JUSTICE. (158/1.)

Fires by Focussing the Sun's Rays.

SIR,—I have more than one black place on the top of a show case caused by the sun's rays being focussed through a carboy; in one instance upon going into the shop I saw smoke coming from the case, and found a flame about as big as a candle, which had set fire to a cigar-box standing on the top; I put it out and drew down the blind, then went and fetched my neighbour to see the effect; we drew up the blind and in about two minutes it was on fire again. This happened early in the spring.

Yours truly,

W. J. PRIDGEON.

October 12.

The Inquest on Catherine Gilbert.

Mr. Robert Brown, M.B (Bourne), who stated at the inquest reported last week that he had recommended that no opium should be given to the deceased, but that he never expected his orders would be followed, and that the woman could not live without it, writes to say that the report is a little misleading owing to the absence of the context. "When asked by Mr. Gilbert at the end of Mrs. Gilbert's illness if the latter was to have any opium should she ask for it, I said certainly not, but all the while I believed that Mrs. Gilbert, as she recovered her strength, would revert to a habit she had consistently followed for forty-five years, more especially as she herself had not expressed any desire or inclination to break the habit."

Influenza Cure.

Erica (114/3) says:—"I used to be very susceptible to colds, and have found the following answer in my case. As soon as I perceive a cold coming on I take at bedtime:—

Tr. camph. eo.	..	..	..	..	3j.
Tr. cinchon. co.	..	..	..	..	3ij.
Sp. æth. nit.	..	..	..	..	3ij.
Aq. ad	..	..	..	..	3ij.

Ft. haust.

and rarely need any further treatment. I find the best preventive is a cold bath every morning."

American v. English Dentists.

SIR,—Your correspondent, Mr. Smale, is proud of his Dental Hospital. He may be, for it is a good one; at the same time there are better. The University of Michigan is a much superior school of dentistry, for it is the finest in the world. I send you an account of this university, which you can quote for Mr. Smale's delectation if you like.

[The article sent is an account in the *Monthly Homœopathic Review* for October, 1889, of "Homœopathy in the University of Michigan." It is written by an enthusiastic professor of that university, and incidentally mentions that the dental department is "said to be the finest in the world."]

The attempt made in England to boycott foreigners and colonists holding medical and dental degrees has been of late years of so glaring and offensive a nature that foreigners are beginning to retaliate, and in time will ignore all English qualifications, as witness Canada, France, Switzerland, Austria, and some American States.

Many of the American dentists, so called in England, are declamatory at times, not to say obtrusive, but the real

representative dentist of the United States prefers as a rule to stop at home, where he flourishes.

Yours truly,

October 23. FAIR PLAY AND NO FAVOUR. (138/38.)

Copies of Prescriptions.

SIR,—I shall be very glad to ascertain through your valuable columns what is the voice of my brethren in the drug line as regards the giving copies of prescriptions. Being located in the very heart of the West-end stores I find it no uncommon circumstance to know that after having supplied my customer with the wished-for copy, it has been dispensed at some of these cutting establishments. On the other hand, should I refuse to comply with my customer's request, I frequently have to stand an unlimited storm of abuse. In courting the ideas of some of your readers on the above, I have only to add it is my opinion that in supplying copies of prescriptions (except in deserving cases) we are deliberately giving away our bread and cheese.

Yours truly,

J. G. K. (152/39.)

LEGAL QUERIES.

Quercus writes:—"I engaged a junior, aged 20, from Birmingham, with five years' experience and good character. Now I find he has never made a tincture or a batch of pills; told me s.v. rect. and spt. tenuior were the same thing, and that p. antim. tart. was potass. carb.! Could not read a prescription, and cannot translate unam, duo, tres. I discharged him at once, paying only his rail fare home. He was with me five days. Was I legally justified or not in sending him off as I did?" [We should not care to give a definite opinion without seeing all the correspondence and making various inquiries. But it is likely you were justified, as on accepting the situation the assistant tacitly professed to be competent to discharge the duties associated with it.]

152/65. *T. W. P.*—You can get a form of application for registration of a trade-mark at your post-office. The application costs 5s., and registration will be refused if the mark is already registered. Or a search can be made at the office, Southampton Buildings, Chancery Lane, on payment of a fee of 1s.

153/69. *Doubtful.*—We do not think either label renders the lozenges liable to medicine-stamp duty; but you can get an authoritative opinion by sending the labels in duplicate to Somerset House. Why not do so? Bear in mind that you may render the lozenges liable by other written or printed matter, even if the labels pass.

Mr. S. Hardwick (Bournemouth), *Mr. R. L. Gifford* (Blackburn), *Mr. S. Stephens* (Huddersfield), and a Plymouth correspondent kindly advise us (referring to an answer in this section given last week) that a separate licence for the sale of methylated spirit is required for each branch. *Mr. Gifford* says he was under the contrary impression—and compromised by paying 10s.

156/70. *S. E.*—You must get a licence from your local authority to store petroleum, or you are liable to a penalty of 20l. a day. But the petroleum, to which the Acts apply means only specially inflammable oils. You will find particulars of the Acts in the *DIARY*, 1889, page 233.

156/30. *Mids.*—Neither the English nor the Irish college would refuse to give you a dentist's diploma if you fulfilled the conditions of curriculum and examination, on the ground that you are a chemist. But you would have to submit to the condition of not advertising your profession as a dentist.

156/27. *Bathonian.*—If the wine contain not less than 1 grain of sulphate of quinine to the oz. it may be sold by chemists and druggists who are not licensed to retail wines.

156/68. *Hotspur.*—The exhibition of unstamped dummies is not an offence. You are liable if you vend or expose to sale, or offer or keep ready for sale, "any packet, box, bottle," &c., "containing any of the drugs, herbs, oils, waters," &c., unstamped.

156/73. *Fair Play.*—It is not the case that the Board of Inland Revenue have any particular animus against chemists and druggists. It naturally happens that they yield the greatest number of victims to the Medicine Stamp Acts, but it is nonsense to suppose that they are specially chosen as examples. You should give us the page of *Mr. Alpe's* book to which you refer. You are evidently not quoting exactly. Menthol, vaseline, and glycerine, if uncombined with other substances, are regarded as pure drugs, and as such are exempt from medicine-stamp duty, and may be recommended for any disease.

156/49. *Vaseline.*—To obtain a patent, application must be made on a printed form of declaration, which can be obtained through a general post-office, and must be accompanied either by a provisional or a complete specification, according to the condition of the patent. These must be sent to the Patent Office, Southampton Buildings, London. The fees payable on application are 4l.; on renewal before the end of fourth year, 50l.; before the end of seventh year, 100l. Instead of paying these fees in a lump sum they may be paid by yearly progressive instalments up to the end of the thirteenth year. (Full particulars will appear in *THE CHEMISTS' AND DRUGGISTS' DIARY* for this year.)

The Title "Wholesale Druggist."—A Lancashire chemist who does not wish his name to appear sends us copy of a correspondence which he has had with the Secretary of the Pharmaceutical Society. He stated in his letter:—"A firm has existed in Lancashire for the last three or four months styling themselves 'wholesale druggists,' who, until their venture as druggists, were all travellers in sundries (dry-saltary goods), and are now supplying most grocers in Lancashire with pills, tinctures, and cough-mixtures to the detriment of the legal trade. Are they right in so styling themselves, their names not appearing on the Chemists' Register; if not, should you deem it necessary to take action?"

In reply to this *Mr. Richard Bremridge* writes under date October 14, 1889:—"I hardly think the Council would interfere in the case you mention unless the unregistered persons have an open retail shop. From your letter I imagine the business to be entirely wholesale."

[We are disposed to agree with the policy indicated in the above letter, but we think the Council, not the Secretary, should take the responsibility of deciding on action or non-action.]

156/9. *J. T. M.*—We should think you are infringing another maker's title; but you can ascertain whether the title has been registered by a search at the Trade Marks Office, Southampton Buildings, Holborn. We cannot undertake to make such searches.

156/4. *Vir.*—We must leave you to draw your own conclusion from the report of the case referred to.

156/15. *Gold Fillings.*—The time has long passed when you could get registration as a dentist in Victoria or New Zealand without passing the fixed examinations.

158/41. *Pot. Iod.*—We do not think it a fair subject for complaint that hospital prescriptions are written in a manner which is unintelligible to other dispensers than the one actually engaged there. It might not be always to the advantage of the patients if they could take away the prescriptions and get them made up where and as often as they like.

MISCELLANEOUS INQUIRIES.

A large number of correspondents ask us for formulae and other information already published in this journal. It is not fair to more careful readers that we should frequently repeat such information, and so long as the back numbers containing the formulae or replies required are in print we must decline to do so. Back numbers of our weekly issue can be obtained from the publisher at 4d. each.

Correspondents who have made inquiries regarding the following subjects will find the information in the numbers indicated.

158/58. *Rhei*.—Cough Syrup.—See DIARY.

151/15. *Homer*.—Himrod's Cure.—December 8, 1888, page 803.

115/35. *Specs*.—Books for spectacle trade, see June 15, page 838.

156/33. *C. H. B.*—Brompton Cough Mixture.—March 23, page 413.

138/74. "Leeming's Essence":—

Cantharides	2½ oz.
Euphorbium resin	2 "
Camphor	½ "
Soft soap	1 "
Oil of origanum	2 drachms
Spirit	a sufficiency

Macerate the cantharides, euphorbium, and soap in 15 oz. of spirit for eight days, shaking twice daily; then strain, press, and wash the marc with sufficient spirit to make 1 pint; dissolve the camphor and oil in the essence, and filter.

S. P. B. (149/61) and *Agricultural Chemist* (150/42).—You can gather a formula for vermin-killer from Mr. Allen's paper, read before the British Pharmaceutical Conference, and reported in this journal on September 14.

150/57. *Carlo*.—As good a Plate Powder as any is a mixture of precipitated chalk, 2 parts, and carbonate of magnesia (heavy), 1 part. Colour with a little Armenian bole. It is advisable to use a little solution of ammonia with the powder.

150/56. *Spongio* has soiled some sponges with cod-liver oil, and finds that after washing them in hot water and pearlshes the odour of the oil is stronger than ever. It is a difficult matter indeed to get rid of this odour. The following treatment is the most effectual that we know of:—

Permanganate of potash	1 drachm
Water	½ gallon

Dip the sponges in this bath for five minutes; then remove and immerse in a solution of sulphuric acid (1 part in 20 of water) until the brown colour disappears. Then wash well with cold water, and finally dip in water containing 1 drachm of annatto and 1 oz. of carbonate of potash in each gallon.

150/37. *T. F. Walker*.—Gorham's "Teeth Extraction" (Lewis, 1s. 6d.) is the book you require.

149/38. *Tablet*.—Mr. F. W. Fletcher's article on "Tinctures," which appeared in this journal a few months ago, gives the best information available regarding the estimation of alcohol in these preparations.

143/48. *T. F. W.*—Lavender Water.—It is a fact that the best lavender oil to use for this perfume is the Mitcham product which has been mixed with its own volume of rectified spirit and kept for at least six years. The solution

which you send is a fair lavender water. We should improve it by amending your formula so that it would be:—

Oil of lavender	1½ oz.
Essence of ambergris	½ "
Oil of bergamot	1 drachm
Musk	4 grains
Rose water	4 oz.
Rectified spirit	35 "

Mix.

The mixture of lavender oil and rectified spirit which you have is so old and mellow that you require to use a little more than usual of it to bring out the distinctive odour which pleases most people.

151/25. *Mortar*.—The therapeutic activity of your solution of morphine hydrochlorate has not been diminished by keeping. The colour may be removed by shaking up with purified animal charcoal (½ oz. to 1 pint) and filtering.

149/70. *Ireland*.—To Preserve Lemon-juice there is required a little salicylic acid (3 grains per ounce) in addition to 2 oz. of rectified spirit per pint.

140/73. *W. R. B.*—Haustus Valerianæ Co. (St. George's Hospital).

Tr. valerian. ammon.	5j.
Dec. aloes co.	5ij.
Spt. chloroformi	℥xx.
Infus. valerian. ad	5j.

M.

150/6. *S. Mierzinski*.—There is not a book published in English regarding the manufacture of fruit essences. The trade is in the hands of a few persons, who keep secret the methods by which they work.

150/23. *Pharmacist* wishes to know in making Liq. Calcis where distilled water is not always at hand, and hard water (about 17°) is used, would not the excess of lime carry down the hardness, and render the liq. calcis as strong as if made with distilled water? The hard water is free from organic matter, and pure, with the exception of the lime salts usual in chalky waters.

[It has been proved that distilled water takes up and retains a little more calcium hydrate than hard water does; but the deficiency in the latter case does not take the lime water below the pharmacopœial standard. It is the possibility of the natural water containing sodium salts and chlorides which renders its use objectionable.]

149/8. *Physostigmatis*.—Unguentum Sodii Hypo-sulphitis:—

Sodium hyposulphite	30 grains
Water	1 drachm
Lanoline	3 "
Lard	½ oz.

Dissolve the hypophosphite in the water, and mix the solution with the lanoline, then add the lard.

150/66. *Nilil, &c.*—Gold and its salts are insoluble in chloroform, turpentine, and essential oils.

128/47. *Lecture on Foods*.—You would require to have an elementary knowledge of animal physiology before attempting a lecture on foods. Read Huxley's lessons and Johnston's "Chemistry of Common Life." For an hour's lecture you will find air, water, bread and sugar (as representing the amylaceous element), milk, eggs, and butcher meat (representing the fatty and nitrogenous) sufficient. We cannot spare the space for an outline of the lecture, but with the books which we have named you should have little difficulty in preparing a lecture to meet the requirements of your audience.

146/71. *Dens.*—You should be much more precise when you ask questions. What you asked before was a book on practical dentistry. For **Tooth-stopping** the following are the best books:—Flagg's "Plastics and Plastic Fillings" (Waite, Oxford Street, Liverpool, 13s. 6d.), and Webb's "Notes on Operative Dentistry" (C. Ash & Sons, 9s.).

151/9. *Menthol.*—To remove the dirt from a picture wash carefully with a warm solution of carbonate of soda, then with cold water, and dry. The varnish can be removed with turpentine, but you must be careful in using it.

152/10. *Rutland.*—(1) If a candidate for the Bell scholarship fails he may present himself a second time provided he has not passed the age (22). The papers can be obtained from the secretary to the Pharmaceutical Society. (2) Full particulars regarding the Royal Exhibition and National Scholarships will be found in the Science and Art Directory, obtainable at the Government printers, price 6d. (3) No.

151/17. *Ergotina.*—Tea (black) contains about 10 per cent. of tannin, so that 1 lb. will contain about 1½ oz. of tannin. There is no practical means of extracting this without removing the peculiar odour of the leaf.

152/17. *Agnus.*—The amount of sugar in diabetic urine is tested with Fehling's solution.

151/52. *F.*—**Russian Gelatine** is a superior quality of glue, *i.e.* ordinary gelatine in thin sheets.

154/47. *Brut.*—**Capping Leather** should simply be dipped (not soaked) in lime-water. It is sufficiently flexible not to require soaking, which only helps to remove the white facing.

144/50. *An Admirer, &c.* Thanks; we have many such polypharmic prescriptions, but have no space to spare for them.

151/22. *C. C. B.*—The fungus is the stinkhorn (*Phallus impudicus*).

151/29. *E. H. Lee.*—The specific gravity of 30 per cent. **Hypophosphorus Acid** is 1.1367. Your acid is therefore practically of this strength.

154/19. *Lemonade.*—We do not think it would be quite honest on our part to take money from the maker of the essences you name, and then do our best to undermine his business.

149/61. *S. P. B.*—Alkali-makers advertise in this journal. You do not appear to have written to them.

151/28. *Mortar.*—Makers of fancy boxes advertise in this journal. Have you applied to them?

151/16. *Nemo.*—It is frivolous to ask us what is understood by "pharmaceutical chemistry," unless you tell us the connection in which the term is used. Attfield's "Chemistry" is as good as any for the purpose you name.

Coloured Fires.—In reply to 127/67, *Benzoin* (156/48) says powdered shellac is generally mixed with coloured fires to make them burn sooner.

156/69. *F. Johnston.*—You will find a veterinary note on "anthrax" in our issue of March 3, 1888, page 298.

155/11. *Muc. Aca.*—We should be glad if you would refer us to the number containing the formula. We do not recognise it as ours, and should think that it is impracticable.

156/51. *F. S.*—Judging from the physiological results which Dr. John Gordon recently obtained in a research on **Paraldehyde**, we should say that two teaspoonfuls of that hypnotic would not be a dangerous dose, although there seems no sense in giving so much. See Dr. Gordon's paper, published in a March number of the *British Medical Journal*.

156/1. *Annesley.*—(1) How can dec. aloes. co. conc. 1 to 7 possibly be made without omitting spirit? Impossible. (2) **Stomach Mixtures**:—Add 1½ oz. of liq. pepsin. c. bismuth. (DIARY formula) to 6½ oz. of peppermint-water. Dose: a tablespoonful. (3) It altogether depends upon the nature of the sore.

156/8. *Timon* wants to know how the following can be made a presentable-looking **Colic Drink**:—

Spt. æther. nit.	..	..	..	..	3iss.
Ol. terebinth.	..	..	..	..	3j.
" menth. pip.	..	..	..	..	gtt. x.
" juniperi	..	..	..	..	3j.
Tinct. opii	..	..	..	..	3j.
" capsici	..	..	..	..	gtt. x.
Aquæ ad	..	..	..	..	3x.

M.

Only by emulsifying the oils. The simplest way would be to mix the yolk of an egg with 2 oz. of water and add the oils, then the remaining ingredients.

158/3. *Seidlitz.*—The advertising involves nearly all the risk in introducing a patent medicine. If we understand you correctly, your friend offers to pay all advertising expenses, and asks you to provide material, and then share profits equally. He offers liberally, because his expenditure is all risk, while you only spend money to meet actual business.

Check-tills.—In reply to 149/3, Mr. F. W. Doubleday, Dorking, writes in very commendatory terms of Stokes's till, which, he says, "answers well, is easily worked as an open till, and is a great security against carelessness and dishonesty. I would not be without mine for ten times its cost. I can conceive that a dishonest assistant would greatly object to it, but not an honest one. It does not interfere with business in the slightest."

157/44. *Gingerified* should read our last Educational number.

158/44. *Student.*—See reply to *Dens*.

158/10. *Bilious.*—**Antipyrin** is freely soluble in water, and may be given in mixture, sweetened with syrup of orange. Five grains make a good pill, with a grain of tragacanth and a tiny drop of water.

156/23. *C. B. S.*—To remove **Warts**.—Apply nitric acid morning and evening, and take 5 grains of calcined magnesia thrice a day.

Information Wanted.

[Replies to the following requests are solicited by correspondents of THE CHEMIST AND DRUGGIST.]

153/5. Fellow's pills, a substitute for Bland's pills. Where obtainable.

149/61. Makers of "Vulcan or Scotch cement," for joints in heating-apparatus.

"BUBBLES."

This artistic SHOWCARD, measuring $21\frac{1}{2}$ in. by 30 in.,
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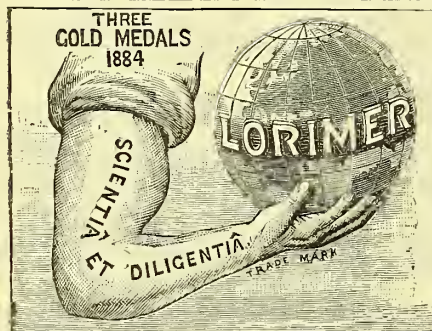
Put up in all sizes of bottles. A strap with Name and Trade Mark of the Firm is placed over the stopper of each bottle. For Export, in bottles corked and luted (stoppers attached), and in hermetically sealed flasks when required.

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ACID, GALLIC	Almost white needles	Freely and entirely soluble in alcohol or water
" PYROGALLIC	Bi-sublimed, white, bulky	Ditto ditto ditto.
" SALICYLIC (Kolbe's)	White, powder, crystallised and dialysed	Dissolves colourless in water or alcohol; purest for medicine.
" TANNIC	Lightest crystals	Dissolves almost colourless in water, alcohol, and ether.
" "	Powder and granulated	Dissolves freely in water, alcohol, and ether.
CELLOIDINE (Patent)	Gelatine plates... ..	Purest Pyroxylin; inexplusive.
CHLORAL HYDRATE	White cake and crystal	See Liebreich's, below.
CHLORAL HYDRATE (Liebreich's)	Transparent rhomboidals (facsimile of Dr. Liebreich's)	Will not decompose by age.
CROTON CHLORAL... ..	Shiny crystalline scales. (Powder form most objectionable)	Free from foreign chlorides.
GLYCERINE... ..	S.G. 1260, double distilled, brilliantly white, odourless; also lower S.G. and qualities	Free from lime, chlorides, metals; will stand severest chemical tests.
IODINE	Resublimed, fine scales	Purest.
IODOFORM, Absolut.	Crystals and powder of soft touch...	Purest; made by electrolysis.
PARALDEHYD		Absolutely purest.
POTASS. BROMIDE... ..	Fine white dry regular crystals ...	Perfectly free from iodide and the most free from chloride.
" PERMANGANATE	Large and small crystals	Chemically pure.
" IODINE	Fine white dry regular crystals ...	Apply Barytic and other tests. This will never change colour.
SODA SALICYLATE, and other Salicylates	White powder and crystals	Freely soluble in water and alcohol.

H. FINZELBERG, of Andernach-on-Rhine.

ERGOTINE, pure Dialysed ...	Brown colloid, purified by Dialysis	Free from all saline matter present in the ordinary Ergotine and extracts.
FERRUM OXYD. (5% Dialysed,	Transparent brown liquid, purified by Dialysis	Free from all saline matter. Diluted by ten times its weight of water, will stand the test of Nitrate of Silver.
PEPSIN PORCI (100%)	White, sweet, odourless powder ...	Freely soluble in water, not hygroscopic, and will not deteriorate; will dissolve (by Wittstein's test) 100 parts of white of egg and 250 parts of fibrine.

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THE ORIGINAL AND ONLY GENUINE.

IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that 'Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.'

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th, 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

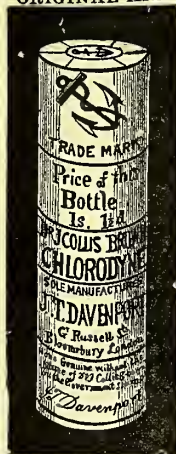
The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

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ONLY GENUINE.

FURTHER IMPORTANT NOTICE.

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Banks & Richards,	Birmingham	Goulding, Messrs.	Oork	Parsons & Richardson	Leicester
Barron, Harvey & Co.,	London	Gratton & Co.,	Belfast	Peake, Allen & Co.,	Dublin
Bell, John, & Co.,	"	Grimwade, Ridley,	London	Raines & Co.,	York
Bourne & Taylor,	"	Grindley & Son,	Chester	Raines & Co.,	Edinburgh
Corbyn & Co.,	"	Hearon, Squire & Francis,	London	Sang & Barker,	"
Cox & Gould,	"	Hodgkinson, Tonge & Stead,	"	Sanger, J., & Sons,	London
Curling & Co.,	"	Hopkins & Williams,	"	Sim, James & Co.,	Aberdeen
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MOONSEED BITTERS brings FULL PRICES.

WHY?

Because every one who retails Moonseed Bitters has to sign an Agreement or Contract in the following terms:—

Memorandum of Agreement made this.....day of..... 1889, between A. E. POWELL & COMPANY, of Swindon in the County of Wilts, Proprietors of the Moonseed Bitters and Moonseed Ointment (hereinafter called the "Vendors"), of the one part and of (hereinafter called "the Purchasers"), of the other part.

Whereby it is mutually agreed between the said parties hereto as follows:—

In consideration of the Vendors selling to and supplying the Purchasers with Moonseed Bitters, Moonseed Ointment, and other preparations manufactured and sold by them (hereinafter termed "the Goods") at their usual prices, the Purchasers will observe and perform the following terms and conditions:—

1. The Purchasers to sell the Goods retail for full printed prices only, and for each and every Bottle or Box of Moonseed Bitters, Ointment, or Pills sold by him or them at any less price, without the written consent of the Vendors, the Purchasers shall pay to the Vendors the Sum of Twenty Shillings in the nature of a penalty, to be recoverable as ascertained liquidated damages.

2. The Purchasers not to supply any Wholesale House nor to sell the Goods wholesale to any Chemist or Druggist or Medicine Vendor who will not previously enter into an Agreement to retail the same at prices in accordance with the preceding Clause No. 1 of these presents.

All Purchasers who have signed a similar form of Agreement to the foregoing will be supplied upon the Vendors' usual trade terms, but those Purchasers who do not sign a similar form of Agreement to be supplied upon the following terms only, namely:—**RETAIL**, 4s. 5d. for each and every 4s. 6d. Box or Bottle, 2s. 8d. for each and every 2s. 9d. Box or Bottle, and 1s. 0½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. **WHOLESALE**, 4s. 4d. for each and every 4s. 6d. Box and Bottle, 2s. 7d. for each and every 2s. 9d. Box or Bottle, and 11½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. This Agreement and the terms and conditions herein contained to remain in full force and virtue for the term of 7 years from the first day of March, 1889.

As witness the hands of the said parties hereto the day and year first above written.



MOONSEED BITTERS.

Above is Facsimile of
THE WRAPPER LABEL
of the 2/9 size.

It is also sold at 4/6.

MOONSEED OINTMENT.

Retails at 1/1½, 2/9, 4/6 per box.

We call attention to the important steps which we have taken to prevent our specialities being retailed at less than the advertised prices, and we ask the co-operation of the Trade in maintaining the integrity of the scheme whereby the sale of our preparations may always be retained by the legitimate trade. We will not only endeavour, by all means in our power, to prevent the advertised prices being "Cut," but will give Chemists every assistance and facility for making this a large as well as a paying business.

Please write for Terms and Form of Agreement. NOTE that we allow retailers of Moonseed Bitters 2s. 6d. per thousand for the Distribution of Pamphlets.

A. E. POWELL & CO., SWINDON.

**Coca
Coca
Coca
Coca**



**Tablets
Lozenges
Elixir
Tea**

SOLE PROPRIETORS—

**THE FRENCH HYGIENIC SOCIETY OF LONDON, 6 CONDUIT STREET, LONDON, W.
REGENT STREET,**

whence will be forwarded to any applicant a Pamphlet containing the testimony of eminent British and Foreign Medical Authorities to the invaluable properties of the Coca Preparations.

"THE CHEMIST AND DRUGGIST" (of March 30, page 429) says—"The French Hygienic Society of London have for some time made a speciality of preparations of the coca leaf, such as coca-tobacco, which were calculated to be used as articles of daily consumption; and they now add to their list several which are designed to maintain the popular use of the Peruvian Invigorator. Coca tea—an excellent blend of the coca leaf and a choice Ceylon tea—is likely to be a favourite, for it makes a pleasant beverage of good aroma which is powerfully restorative. Their coca elixir is a good idea. It is intended for use along with any table wine, 15 to 20 drops of it making with a glass of sherry a good coca wine, possessing the full flavour of the leaf. This flavour is a marked characteristic of all the preparations, especially the tablets and lozenges, and is an indication that care has been exercised in their manufacture. The tablets and lozenges may be used for throat troubles; and those without borax are a portable form of the restorative for use by athletes and pedestrians. All these specialities are put up in attractive style."

RETAIL PRICES.

Coca Tablets and Lozenges in boxes, 1/-, 2/6, & 4/- per Box.

Coca Elixir 3/- " Bottle.

Coca Tea in tins of 1 lb. 4/-, ½ lb. 2/-, ¼ lb. 1/-.

USUAL WHOLESALE DISCOUNT. CAN BE OBTAINED FROM ALL WHOLESALE HOUSES.

WITHOUT A RIVAL!

From the time Medicine was first discovered by the Ancients down to the present none ever made such progress as

BEECHAM'S PILLS.



They stand without a rival, and have by far the largest sale of any Patent Medicine in the World. This is a fact which every business man is bound to admit.

All Foreign Dealers will find BEECHAM'S PILLS the most Saleable Medicine in the Market.

The health-restoring and life-giving properties of these Pills are such as to increase their demand every year.

The words "BEECHAM'S PILLS, SAINT HELENS," are on the Government Stamp affixed to each box.

Prepared only and sold by the Proprietor, **THOMAS BEECHAM, ST. HELENS, LANCASHIRE, ENGLAND**, in boxes at 1s. 1½d. and 2s. 9d. each, with full instructions for use.

SPECIAL CIRCULAR AND PRICE LIST.

[COPY].

THE ALOFAS COMPANY,

Central Depot—20 NEW OXFORD STREET, LONDON, W.C., 1889.

DEAR SIR,—We have the pleasure to enclose you a descriptive pamphlet—with handbills—of **The Alofas Company Safe Herbal Specialities**, with a list of the Prices charged to the Trade.

The Alofas Remedies, which have been locally celebrated for many years, are now being largely advertised in the London and Provincial Press, and are meeting with a ready and increasing sale. These preparations are pure concentrated botanical medicines of great value and efficacy, and will supersede many of the Patent Medicines now before the public.

The Alofas Company begs to call your especial attention to one important feature attending the sale of these Remedies.

In view of the injurious effects to the Trade from the cutting prices and underselling now so universal, the Alofas Company have decided to supply their Medicines on the distinct **condition and understanding** that they are to be sold to the general public at the *advertised prices only*, and they will refuse to supply their goods to any customer (however large a quantity he may be willing to take), unless this condition is complied with. This regulation is solely intended for the protection of the Trade from the disastrous effects of the present cutting system, and to ensure to each Retailer a fair living profit on the article sold; and the Alofas Company earnestly trusts that it will have the co-operation of its customers for their own sake in carrying it out.

At the same time care has been taken that the general public shall not suffer from this arrangement. The quantity of the Medicine supplied is greatly in excess of that usually given for similar prices by manufacturers of other proprietary articles. In all cases full value is given *up to the amount* on which the *stamp is charged*, and at the advertised prices, the Alofas remedies are the cheapest in the market. As an instance of this we may refer to the Alofas embrocation, an eight-ounce bottle of which is sold for $1/1\frac{1}{2}d$. Each box or bottle will bear a label, stating that it is not to be sold under the price mentioned. The prices charged to the Trade for our Preparations are as follows, viz.:—

RETAIL SIZE.		WHOLESALE PRICE.
$1/1\frac{1}{2}$		9/6 per doz. net.
2/9		25/0 „ „
4/6		42/0 „ „

TERMS—CASH.

We are, dear Sir, yours faithfully,

THE ALOFAS COMPANY.

THE ALOFAS COMPANY'S SAFE HERBAL SPECIALITIES

The **ALOFAS** TINCTURE.—A sure cure for Consumption, Bronchitis, Pleurisy, and all Throat and Chest Diseases.

The **ALOFAS** POWDER cures all Wasting Diseases, Night Sweats, Debility, Brain, &c.

The **ALOFAS** PILLS for Indigestion, Constipation, and all Liver and Bowel Disorders.

The **ALOFAS** STOMACHIC cures Flatulence, Heartburn, Sour Eructations, and all Kidney and Heart troubles.

The **ALOFAS** EMBROCATION.—A boon to Athletes. Cures Sprains, Rheumatism, Stiff Joints, &c.

The **ALOFAS** SALVE-OINTMENT for Chaps, Chilblains, Cracks, Rough Skin, Ulcers, &c.

The **ALOFAS** RINGWORM OINTMENT: a sure cure. Also for Scabies, Parasitic Eruptions, &c.

The **ALOFAS** OINTMENT for Piles. Never fails to cure.

The above Remedies are safe, sure in their action, never disappoint, and are free from all poisonous or injurious ingredients.

PRICES—The Tincture, Powder, and Stomachic, $1/1\frac{1}{2}$, 2/9, and 4/6 per bottle or box.
The Embrocation, Pills, and Ointments, $1/1\frac{1}{2}$ per bottle or box.

SOLD BY ALL CHEMISTS, AND BY

THE ALOFAS COMPANY,

Central Depot: 20 NEW OXFORD STREET, LONDON, W.C.

ARMBRECHT COCA WINE

(ERYTHROXYLON COCA).

FOR FATIGUE OF MIND AND BODY.

A NEW RESTORATIVE TONIC

OF

VOCAL, MENTAL, AND PHYSICAL POWERS.

Particularly useful in Hot and Enervating Climates.

Trade Discount,
25 per cent.

June 28th 1889
25 New Walk Terrace York
 Dear Sir I have been delighted with the
 samples of Coca Wine which you have sent me.
 There is a minute animalcule which is destroyed by the
 heat of summer & which remains on the application of a
 drop of water. Ambrecht's Coca Wine has a similar
 effect in reviving & restoring the exhausted energies of
 the human economy & its procuring & strengthening
 process are marvellous.
 I am, Sir, very truly,
 Yours,
 Edward Allen
 Lecturer on Anatomy & Physiology
 at the West York School of Medicine

Trade Discount,
25 per cent.

THE RETAIL PRICE OF THIS WINE IS

4s. 6d. per Bottle, or 48s. per Dozen Box.

For sleeplessness this Wine is almost always successful, and superior to Opiates,
 Chloral, and Bromides, &c., as it produces no reaction.

ARMBRECHT, NELSON & CO., 2 Duke Street, Grosvenor Square.

BARCLAY & SONS, LIMITED

ESTABLISHED



OVER A CENTURY.

**PATENT MEDICINE DEALERS
AND PROPRIETORS.**

DRUGGISTS' SUNDRIES & SURGICAL INSTRUMENTS
MANUFACTURERS AND DEALERS.

EXPORT ORDERS Promptly and Carefully Executed. QUOTATIONS FURNISHED.
AGENCIES UNDERTAKEN ON THE MOST FAVOURABLE TERMS.

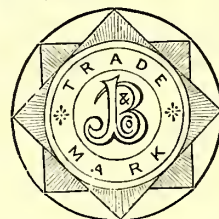
**SHOW ROOM AND WAREHOUSES—
95 FARRINGDON STREET, LONDON.**

M. BAILEY & CO.
MANUFACTURERS OF DRUGGISTS' SUNDRIES.

M. B. & Co. beg to call the attention of the Trade to the following articles manufactured by them:—
Glass Syringes, Nipple Shields, Breast Exhausters, Fittings for Feeding
Bottles, Tubes, and Tube Work in all its branches, &c., &c.

Sole Proprietors and Manufacturers of J. Brooks & Co.'s celebrated Specialities:—Winter Cream,
Lip Salve, Solidified Camphor Cream, Glycerine Jelly, Perfumery, &c., &c.

Buyers are cautioned against imitations of these World-renowned preparations. None are genuine unless bearing
our Registered Trade Mark.



MAY BE OBTAINED THROUGH ANY OF THE WHOLESALE HOUSES. WHOLESALE AND EXPORT ONLY FROM

M. BAILEY & CO., 32 and 34 Buckingham Road, KINGSLAND, N.

A GOOD AND CHEAP ARTICLE. NEATLY PUT UP. NEEDS ONLY TO BE SHOWN. SELLS ITSELF.

3d. "HERCULEAN" CEMENT, 3d.
MUMFORD'S
(Registered Trade Mark, No. 42468)

FOR GLASS, CHINA, EARTHENWARE, MARBLE, IVORY, WOOD, FOSSILS, &c., &c.
IN BOTTLES, 3d. EACH.

Each dozen mounted on attractive Card, 2/ per dozen, less usual discount. Special Terms to large buyers.
Chemists who prefer pushing their own articles can be supplied with this Cement, packed ready for labelling, without name or price enclosed, so that
they can sell it as their own article at their own price, while those who are affected by the competition now so prevalent can label and sell as 6d. bottles
for 3d. or 3½d. Correspondence invited. A Sample Bottle sent post free for two stamps by the

Sole Manufacturer, R. MUMFORD, Chemist, CARDIFF.

Wholesale Agents:—Barclay & Sons (Limited), Edwards & Son, S. Maw, Son & Thompson, Sanger & Sons,
LONDON; T. Durant & Son, BRISTOL.



FOR PRICES OF CHEST PROTECTORS

And other Goods,

See our NEW ILLUSTRATED PRICE LIST.

F. SCHUTZE & CO., Manufacturers, 36A ALDERSGATE ST., E.C.

BAILEY'S RUBBER BRUSHES.



5 inches by 3 inches.

Our Bath and Flesh Brushes have been so well received by the trade, and have met with such ready sale, that it is unnecessary for us to say anything in praise of them here. We shall continue to make them of the very best quality of rubber obtainable, and, as we are advertising them largely, we have every confidence that they will continue to sell well.
PRICE 5/ each (in neat metal cases and with wood handles), or **£2 2s. per dozen.**

THE NEW RUBBER SHAMPOO BRUSH

Size, 7 inches by 7 inches.

The whole as soft and pliant as a silk handkerchief. Eradicates Dandruff, and thoroughly Cleanses the Scalp and Hair of all Impurities, simply by using with pure soap and water. For bathing the Neck and Face, or Children, will be found delightful.

PRICE 3/ each, or 25/ per dozen.

Price Lists, Air Goods, Water Bottles, Sponge Bags, Elastic Bandages, &c.,
UPON APPLICATION.

DAVID MOSELEY & SONS 14 Aldermanbury Ave., LONDON, E.C.; Ardwick, MANCHESTER;
MANUFACTURERS, 57 Miller Street, GLASGOW; BRUSSELS and PARIS.

CLEAN HANDS.



Nothing has ever been invented that will so thoroughly cleanse and whiten the hands as our rubber brushes. Used with soap and water they will remove all kinds of stains without injuring the most delicate skin. They are made of the best Para Rubber, and will last for years.

Price, with wooden handles, 1/ and 2/ each retail, or 8/ and 17/ per doz.

THE SURGEONS' LINT,

V.B. QUALITY.

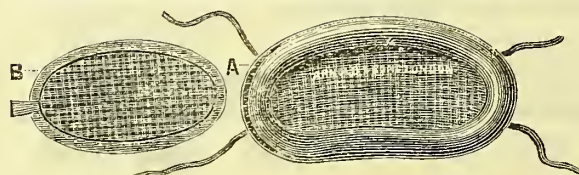
The superior quality of Newsome's Absorbent Surgeons' Lint is universally admitted. The V.B. quality is quite pure and of great superficial area and exquisite softness. The O., D., E., and F. qualities are equally pure and absorbent; E. is stronger in fabric.

NEWSOME'S BLEACHED ROLLED BANDAGES, 3 in., 2½ in., 2 in. Also SURGICAL ABSORBENT OPEN BANDAGES.

Specially Bleached & Grey Carded Cotton Wools, Absorbent & Bleached & Grey Waddings; also Sheet Waddings, Tow, &c.

THE TRADE SUPPLIED THROUGH THE LONDON AND PROVINCIAL WHOLESALE HOUSES, OR FROM

C. NEWSOME, Spinner and Manufacturer, JERSEY ST. MILLS, ANCOATS, MANCHESTER.
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ARNOLD'S Patent SANITARY RESPIRATOR

Vide THE CHEMIST AND DRUGGIST, October 12, 1889:—

"The outer air is inspired through a movable diaphragm of woven Horse-hair, non-absorbent, and covered with silk."

Each supplied with an extra Diaphragm.

Price in Box, Retail, 2s. each; Wholesale, 16s. per dozen.

ARNOLD & SONS, Instrument Manufacturers, 35, 36, & 37 West Smithfield, LONDON.



USED BY SURGEONS ALL OVER THE WORLD.

In ONE WEEK three curious uses were reported for which "THE LEICESTER" IMPROVED ADHESIVE PLASTER, On Fine Flesh-coloured Cambric,

is found the best, after trying other makes (in the first case, nearly every known plaster). A well-known actor said he had the good fortune to meet with it in the South of England, and had inquired for it wherever he went since. It is the only plaster he can find to answer for fixing false hair, &c. A chemist in the North wrote and said a lady violinist would have nothing else; she uses it to make a pad to protect her fingers. A chemist in Yorkshire has a customer who uses plaster to keep his eyes open, and nothing will hold the lids up so well as "The Leicester" Improved Adhesive Plaster on Fine Flesh-coloured Cambric. Surgeons in all parts are frequently commending it. The Sale rapidly increases

See INDEX TO ADVERTISEMENTS, pp. 33-35.

E. GOULD & SON,CHEMISTS TO THE LONDON HOMŒOPATHIC HOSPITAL,
Manufacturers and Importers of**HOMŒOPATHIC MEDICINES**

AND

HOMŒOPATHIC SUNDRIES OF ALL KINDS.PRICE LISTS OF MEDICINES, MEDICINE CHESTS, &c., POST FREE TO ANY PART OF THE WORLD.
59 MOORGATE STREET, LONDON, E.C.Established
1848.**THOMPSON & CAPPER,**Established
1843.**WHOLESALE & EXPORT HOMŒOPATHIC CHEMISTS,**

55 BOLD STREET, LIVERPOOL,

And (late HENRY TURNER & CO.)

51 PICCADILLY, MANCHESTER.

ILLUSTRATED PRICE LIST ON APPLICATION.

THOMPSON & CAPPER'S DENTIFRICE WATER.Sells well everywhere, its beneficent qualities being attested to by physicians in all parts of the world. (*See Testimonials.*)

In 1s. 6d., 2s. 6d., 4s. 6d., and 8s. 6d. Bottles.

Wholesale Agents for the Dominion of Canada:—EVANS, SONS & MASON Limited, MONTREAL

BUYERS ARE CAUTIONED TO SEE THAT THEY GET THE**GENUINE****DR. JOHN HOOPER'S PILLS,**

Which may be known by the Name of the Inventor being on the Government Stamp.

*Handbills and Show Cards will be sent on application to***MAY, ROBERTS & CO., 9 CLERKENWELL ROAD, LONDON, E.C.****AMERICAN BUYERS are particularly Cautioned !!**

Telegraphic Address—"FEEDING BOTTLES LONDON."

C. R. HARKER, STAGG & MORGAN**WHOLESALE & EXPORT DRUGGISTS**

MANUFACTURING CHEMISTS

IMPORTERS & DISTILLERS of ESSENTIAL OILS*PHARMACEUTICAL EXTRACTS—FLUID AND SOLID.***STANDARDIZED AND GUARANTEED DRUGS AND PREPARATIONS.****15 LAURENCE POUNTNEY LANE, & ARTHUR ST. WEST, LONDON, E.C.**

REGISTERED ADDRESS FOR TELEGRAMS—"EDULCINE LONDON." Telephone No. 1949.

THIRD SEASON SINCE INVENTION.

VINCENT WOOD,

(ESTABLISHED 1840)

29, 30, 31 Paternoster Sq., Newgate St., London, E.C.

Depôts at Paris, Brussels, and New York, U.S.A.

Telegraphic Address—"ACME LONDON."

Registered Trade Mark—EUREKA.

Originator, Sole Proprietor, & Manufacturer of the
 "Eureka" Medicated Pine Wool Appli-
 cances, as recommended by the celebrated
 Physician, E. J. GIBSON BERKLEY,
 L.R.C.P., London, M.R.C.S., &c.

Please send for
 Price List.



8½ in. la, 19½ in. high.

These Goods are now considered to
 far excel the old Scarlet Felt kind,
 and are offered at a cost
 enabling Chemists to sell
 at prices as formerly.

Insist upon having
 the "EUREKA" Brand
 of Goods. May be obtained
 from all Wholesale Houses. If
 any difficulty is experienced in ob-
 taining these goods please communi-
 cate direct to the Inventors.

BEWARE OF FRAUDS, as persons having
 similarity of names may try and foist some useless
 trash upon you.

The substance of my Felt is about the same as the best
 quality of Protectors sold; the fabric is thoroughly washable,
 and the colour is a Golden Brown.

N.B.—If you have not had a full detailed Circular of my
 Goods please write for one.

Likewise bona-fide Manufacturer of

Trusses, Elastic Hosiery, Chest-Expanding Braces,
 Abdominal and Riding Belts, Sus-
 pensory Bandages, Eye Shades, and
 Surgical Appliances generally.



FACTORIES AT

STRATFORD, NOTTINGHAM, & ROSE ST.

ESTABLISHED 50 YEARS.



Models, Circulars,
 and Showcards supplied
 free of charge to those
 stocking my Goods.

Copyright.

WINTER GOODS.

Before ordering Chest Protectors, &c., write for sample of

HAYWOOD'S PATENT VENTILATING

The only Chest Protector made on scientific principles.

Manufactured from Pure Natural, Scarlet, and Medicated Pine Wool.
 Made also in Vests, Drawers, Combinations, Chest and Back Pro-
 tectors, Bodices, Waistcoats, Sleeping Socks, Gout Gloves, &c.

Show St and sent gratis with orders for not less than One Dozen.

Chest Protectors and other Appliances for winter made also in
 Chamois Skins, Knitted Wool, Fleecy, Felt, Medicated Pine, &c.

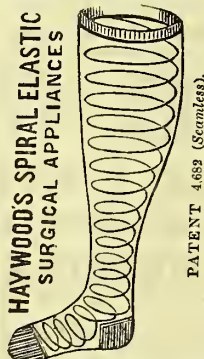
MAGNETIC BELTS,

Chest & Back Protectors, & Socks.

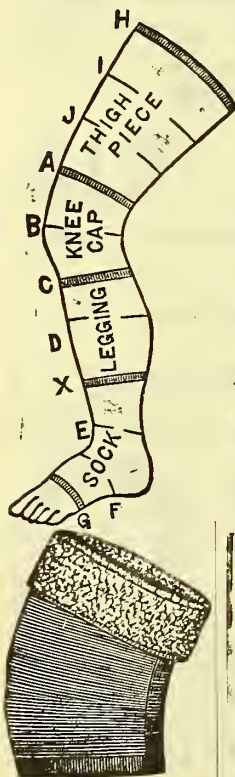
CHILBLAIN SOCKS.

Fleecy Sleeping Socks and Knee Caps. Patent Pile
 Surgical Elastic Knee Caps, Socks, and Stockings.

PATENT SEAMLESS, PATENT PILE,
 and other Elastic Surgical Stockings, &c.,
 in Threon Silk, Cashmere, Scarlet, Pine, and
 Natural Wool.



PATENT 4682 (Seamless).



Patent Pile, Protected,
 14,618. The Pile lying
 over the India-rubber
 Cords, protecting them
 and forming a smooth soft
 surface to the limb.

Hot Water Bottles and Covers. Respirators. Inhalers. Bronchitis Kettles. Throat Sprays
 Waterproof Coats, Cloaks and Driving Aprons. Footballs, Skin Guards, and Athletic Appli-
 cances, Belts, Chest Expanding Braces, Trusses, Suspensory and other Bandages, Druggists
 Sundries, Invalid and Nursery Appliances, &c.

J. H. HAYWOOD, CASTLE GATE, NOTTINGHAM.

BUNION PLASTERS.

For excellent finish and carefully selected White Felt our Plasters will be found equal to the best produced; in adhesiveness and flexibility they surpass all other makers'. We make them antiseptic, which is a very valuable and desirable quality.

In glass-top boxes, containing 72 Plasters, oval, square, round, or assorted. Thin 2/, Thick 2/9 per box.

THIN (in boxes containing 6 Plasters)	..	..	2/8 per dozen.
" " " 12 " "	..	..	5/4 "
THICK " " 6 " "	..	..	3/6 "
" " " 12 " "	..	..	7/ "

BUNION PLASTERS ON KID.

Oval, square, or round, in boxes containing 6 Plasters, 2/8 per dozen Subject to Discount.

MANUFACTURED BY

[4]

SEABURY & JOHNSON,

46 JEWIN STREET, LONDON, E.C.

NEW YORK. MONTREAL. HAMBURG.

TYPKE & KING,Trade Mark **CHEMICAL MANUFACTURERS,** Trade Mark22 LAURENCE POUNTNEY LANE,
LONDON, E.C.

Registered. Manufactories: MITCHAM & RAINHAM. Registered.

Pure Acids—VALERIANIC ACID and all VALERIANATES. ANTIMONY GOLDEN SULPHURET, ANTIM: CROCUS LUMP and POWDER. Essences of Pear and Pineapple. POTASSIUM CYANIDE. Nitrate of Ammonia, crystal and granulated. Potass. Sulphid. Iron Perchloride, solid and solution. HYPOPHOSPHITES OF LIME, MANGANESE, SODA, POTASH, &c. ACID PHOSPHORIC 1750 and 1500.

Hydrochinon and all Chemicals for Photography.

OIL OF OLIVET
OLIVET PILLS
OLIVET LIFE BITTERS
OLIVET REMEDIES CO., 114 CHEAPSIDE, LONDON.**JOHNS'**

The Best and Safest Medicine for all Disorders of the Liver and Digestive Organs; also invaluable in all Female Complaints.

LIVER
PILLS.

Full
Directions
with each Box

PREPARED AND SOLD BY
W. JOHNS, 6 Wilkes St., LONDON, E.

In Boxes 1s. 1½d. and 2s. 9d. each.
(ESTABLISHED UPWARDS OF 50 YEARS.)

THE ORIGINAL GENUINE**EAST INDIA OIL OF MUSTARD SEED**

Is strongly recommended as a safe and effectual remedy in cases of

RHEUMATISM, GOUT, RHEUMATIC GOUT, SCIATICA, LUMBAGO, HEADACHE, PAINS IN THE STOMACH, SPASMS, BRUISES, CHILBLAINS, &c.

RETAIL IN BOTTLES, 1s. EACH.

Imported by J. H. & S. JOHNSON, Wholesale Druggists, 6, 8, and 10 WHITECHAPEL, LIVERPOOL.

Wholesale Agents: London—Newbery & Sons, and Bourne, Johnson & Latimer

COMFORT**FOR THE FEET.**

Corns and Bunions may be removed, and enlarged Toe Joints reduced, by using *Thompson's New French Corn Plaster*. Sole Proprietor, M. F. THOMPSON, Homeopathic Chemist, 17 GORDON STREET, GLASGOW, from whom the Plaster may be had in Packets, by post, for fourteen stamps. Those who are troubled with the discomfort of Corns or Bunions will be glad to have attention called to this remedy, as it removes pain very speedily. It is a simple Plaster, thin as silk, and comfortable to the foot.

Ask your Chemist for it, and take no Substitute.

Wholesale 9/6 per dozen, cash with order, post free.
May also be obtained through London Wholesale Houses.

Walking is now really a pleasure to me. It is put up on Cards. "Very saleable."

MEUPHROSINE.

THE ONLY ABSOLUTELY
SAFE AND CERTAIN
CURE FOR

SLEEPLESSNESS
NERVOUS DISEASES
INDIGESTION AND SPASMS.

Guaranteed to contain no Opium, Morphia, Chloral, or other injurious Narcotics; no Bromide, no Alcohol; does not disturb the brain nor depress the heart. Price 2s. 9d. and 4s. 6d.

Of all Chemists, and of the Proprietors and Manufacturers,

THE MEUPHROSINE MANUFACTURING CO.,
3 Jeffrey's Square, St. Mary Axe, LONDON, E.C.

Read an Epitome on the Causes and Cure of Sleeplessness, &c., containing Medical and other Testimonials, and Analyst's Certificate (published by the above), price 6d. Given away with every bottle.

For Neuralgia, Rheumatism, and all Nerve Pains.

For Disorders of the Stomach, Liver, and Kidneys.

For Purifying the Blood and Curing Fevers.

A. ATTWOOD & CO.

ARE BONA-FIDE
MANUFACTURERS OF

LIFTS

AND

HOISTS.

WORKING BY

Gas-Engine,
Steam-Engine,
Hydraulic, or Hand
Power.

FOR

Passengers,
Goods,
Luggage,
Dinners, &c.

Thorough
Efficiency
Guaranteed.

CONTRACTORS TO H.M. WAR OFFICE
AND COLONIAL GOVERNMENTS.

Canal Head Foundry and Engineering
Works,

ULVERSTON.

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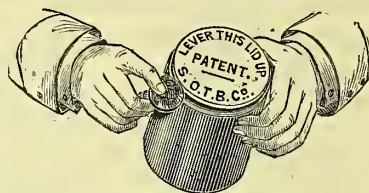
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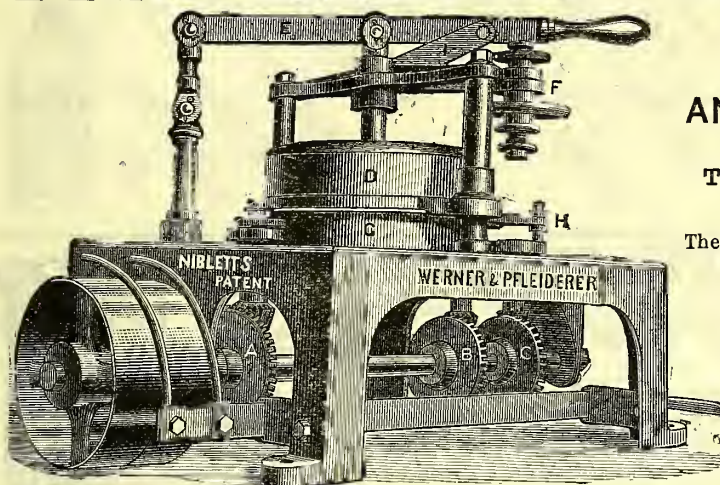
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Chemists can have their own Name on Feeding Bottle Free of Charge.		
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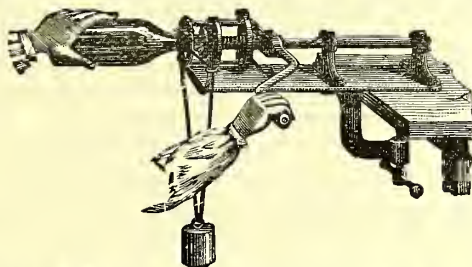
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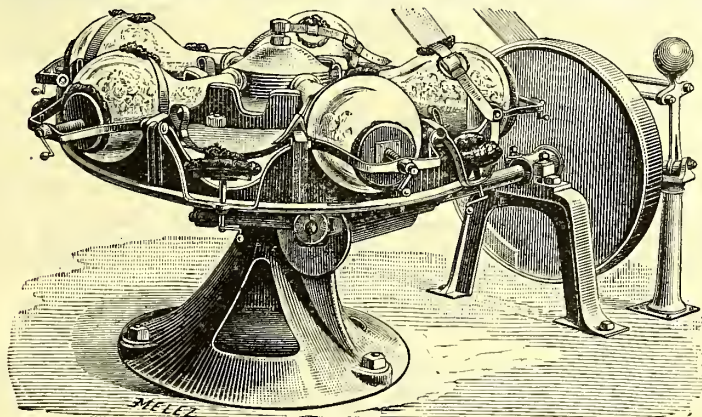
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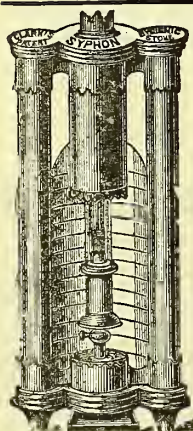
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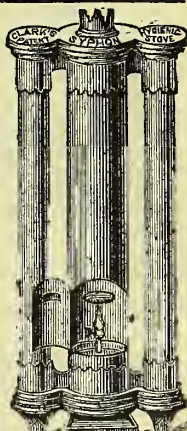
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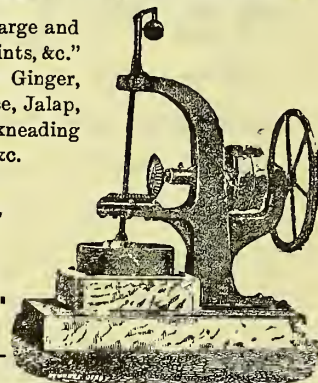
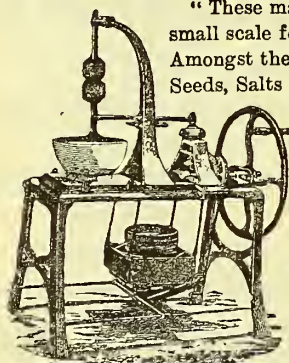
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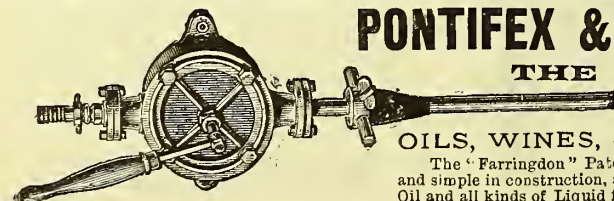
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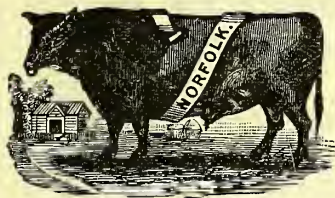
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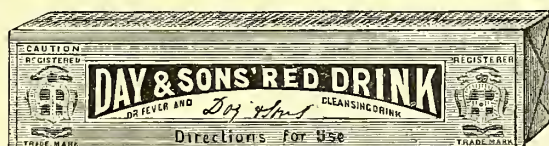
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Possesses an exquisite and penetrating perfume. Keeps the
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teeth and an infallible cure for all dental affections.

Bottles at 1/8, 3/4, 5/6, 9/6, and 16/.

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LIBERAL TERMS TO CHEMISTS. Write for Pamphlet and Circular,
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When buying, compare my Perfumes with other makers', and buy the best.

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"I have found 145 rats killed in my farm buildings by it."—C. Wilson Offord.
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 SANFORD'S MICE POISON for Houses, Buildings, Corn Stacks, &c. Cannot be excelled. Has given entire satisfaction for the past 25 years. In packets 6d., 6d., 1s., and 2s. each, with directions for use, of SANFORD & SON, Sandy, Beds. Liberal terms to Chemists. Wholesale of Barclay & Son, Sanger & Son, Newbery & Sons, Edwards, and others, London (England).

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They are introduced to the public to enable them to make their own HOP BITTERS, YEAST, HOME BREWING, and numerous other purposes. Full particulars given in each packet.

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P.S.—Chemists will naturally see the great advantage in making their own Bitters from the Pure Hop itself. Dealers in every description of Isinglass.

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A Digestive EXTRACT OF TEA, made instantly in Cup or Teapot.

The injurious action of tea upon the digestion is due to the tannin it contains; and as this dissolves instantly in hot water, no method of infusion can keep it out. Santha is the only form of tea that has no action upon either food or membranes; and it is not bilious like cocoa and coffee.
 The *Lancet* of May 4th, 1889, says:—"The aroma and the caffeine are preserved, and the tannin is neutralised and rendered innocuous."
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Santha is the only Tea suitable for Weak Digestions. Of Chemists. Price 1s. & 2s. 6d. Sample Bottles 6d. each; by post 7½d. sent direct from the works on receipt of stamps by the

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YORK STREET, WALWORTH, LONDON, S.E. Established over 40 Years.

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Finest Super Essence of Lemon and all Essential Oils, &c.

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Contains 25% of Allen & Hanburys' Extract of Malt.

A NOVEL CONFECTION.—MOST SALEABLE.

Delicious Flavour. Brilliant and Attractive Appearance.

SELLS AT SIGHT.Vide Dr. Tanner's Report, and *The Chemist and Druggist*, April 20th.

1/ Bottles, 9/ per doz.; 1-lb. Bottles, 21/ per doz.; and in 4-lb. Jars, 1/6 per lb.

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"OLEUM DEELINAE,"

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"SALVO PETROLIA,"

Genuine Petroleum Jelly.

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Superior to Vaseline.

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We call attention particularly to its perfectly **odourless** and **tasteless** quality; and owing to its **genuine purity** it may be prescribed by physicians not only for **external**, but **internal** use. **"SALVO PETROLIA"** is manufactured **by ourselves**, in **this country**, by an entirely **new process**, and it is acknowledged to be the **finest Emollient** and **Remedial Preparation** of **Petroleum** yet produced. It has **never** been **touched** by **Acid** in any way during manufacture, and **complies** with all **requirements** which the **Pharmacopœia** makes upon **this article**.

Manufactured by the Proprietors in three distinct qualities, **WHITE, YELLOW, and RED.**

Packed in Tins, 1, 5, 10, 14, 28, 56, and 112 lbs.

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White	...	1/3	...	1/2	...	1/1	...	1/-	} Nett per lb.
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Golden	...	...	...	...	...	31/6	nett per cwt. in 3-cwt. barrels.		
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Chlorodyne Lozenges.

Porous Plaisters.

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INDIARUBBER POROUS PLAISTERS

Manufactured by WILLIAM MATHER.

REDUCTION OF PRICES.

STRENGTHENING 2s. per dozen.

BELLADONNA 2s. „

CAPSICUM 2s. „

Subject to Discount, as per Price List.

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London Agents—MACE & HALDANE, 94 Milton Street, E.C.

THE ONLY PERFECT ENEMA OBTAINABLE.

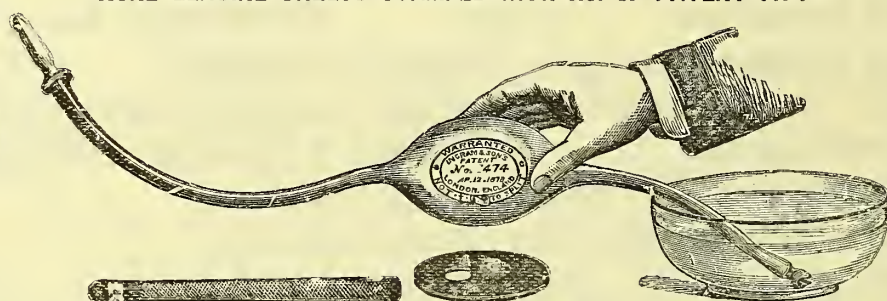
INGRAM'S IMPROVED HIGGINSON ENEMA AND SYRINGE APPARATUS

(BY ROYAL LETTERS PATENT).

Made without Seams or Ribs by our Patent Process of dipping in a solution of India Rubber, thus adding great strength and durability.

NONE GENUINE UNLESS STAMPED WITH NO. OF PATENT 1474.

CAUTION.—The only
Enema made without
Ribs.



All Imitations may be
detected by the Ribs on the
Surface, and are always
liable to split.

WARRANTED NOT TO SPLIT

A.—Metal Pin Valve.

INGRAM'S IMPROVED PATENT SEAMLESS ENEMA is perfectly smooth on the surface, will not become hard or sticky, will not leak, and will not admit air while injecting or refilling. Specially prepared to resist the heat of tropical countries.

The great superiority of INGRAM'S IMPROVED PATENT SEAMLESS ENEMA over all others has given rise to VARIOUS IMITATIONS, and it has become imperative that the Patentees should, in order to PREVENT DECEPTION, explain the PROCESS OF MANUFACTURE OF THEIR ENEMA and the MODE OF MANUFACTURE OF IMITATIONS thereof, as they have UNDENIABLE PROOF that INFERIOR ENEMAS are positively BEING SOLD as their "ADVERTISED" PATENT SEAMLESS ENEMA.

INGRAM'S IMPROVED PATENT SEAMLESS ENEMA is made by a NEW PATENT PROCESS, viz.: By repeated dipping in a solution of India Rubber until the required substance is attained. This process adds greatly to its STRENGTH and DURABILITY, and, at the same time, dispenses with ALL SEAMS, which, as is well known, are weak points in an Enema. This improved mode of manufacture (the result of long study and experience) enables the Patentees to produce a PERFECT ENEMA WITHOUT SEAMS, thus overcoming the great fault to be found in ALL other Enemas, viz.: SPLITTING AND LEAKING, which has always been a source of trouble.

INGRAM'S IMPROVED PATENT SEAMLESS ENEMA is fitted with IMPROVED VALVES, which prevent the admission of air with the fluid and CAN at any time BE REPAIRED, if necessary.

CAUTION.—Imitations of INGRAM'S IMPROVED PATENT SEAMLESS ENEMA are made of several pieces of Sheet India Rubber, which are cemented together and shaped in a mould, thus PRODUCING RIBS ON THE SURFACE, and ENEMAS SO MANUFACTURED ARE ALWAYS LIABLE TO SPLIT AND LEAK AT THE SEAMS, AND THUS TO BECOME QUITE USELESS.

INGRAM'S IMPROVED PATENT SEAMLESS ENEMA may be distinguished from ALL IMITATIONS by its ENTIRE FREEDOM FROM RIBS OF ANY DESCRIPTION on its surface, and by having an IMPROVED METAL PIN VALVE at the suction end A; and it is acknowledged to be the ONLY PERFECT ENEMA OBTAINABLE.

Patented in England, No. 1474, April 12, 1878; in France, No. 126,909, October 11, 1878; and in America, No. 212,939, March 4, 1879.

To be obtained of all Surgical Instrument Makers, Druggists' Sundriesmen, Chemists and Druggists, in the three following qualities:—

No. 1a. Highly Polished, in Red, Green, Blue, Black, or White.

No. 1b. Unpolished, in Red, Green, Blue, Black, or White.

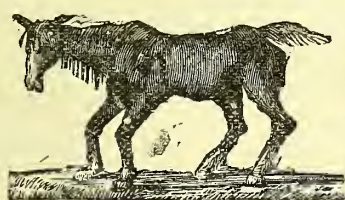
No. 2. Unpolished, in Drab only.

Favourably noticed in "British Medical Journal," December 18, 1879; in the "Lancet," January 8, 1880; and in "British Medical Journal," September 30, 1882.

W. CLARK'S MARVELLOUS EMBROCATION.

WORTH ONE GUINEA PER BOTTLE.

The Best Preparation of the kind ever brought before the Public, giving quicker relief than any other.

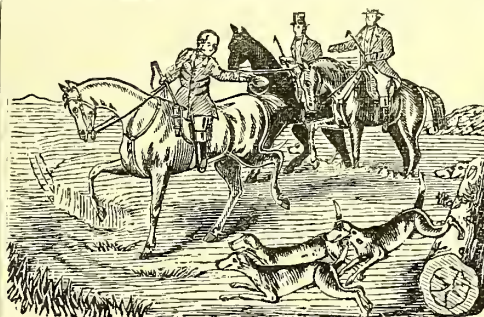


Hump wrong all round.

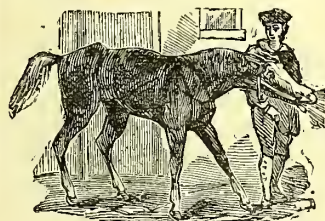
Round Bottles, 18/- per doz.



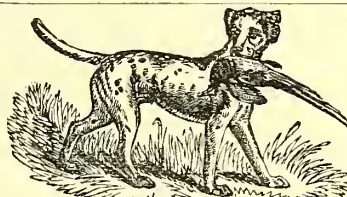
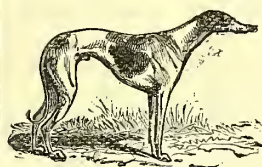
Square Bottles, 15/- per doz.



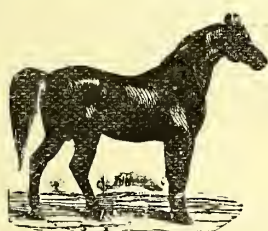
Splints and Big Joints.



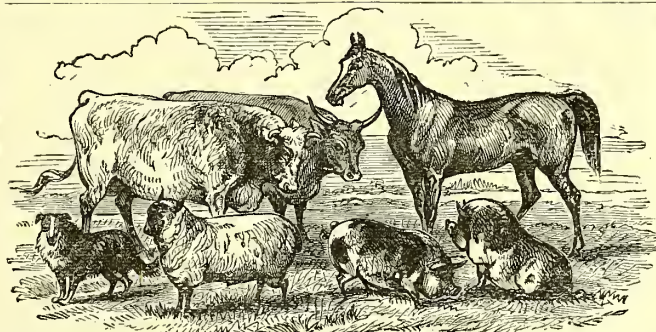
Strong blowing.



Spavin and Carb.



Quite well.



Broken Knees.

Takes away all Soreness, and gives immediate relief and speedy cure in all cases of Lameness, Bruises, Sores, Sprung Sinews, Sprains, Enlarged Joints, Overreach, Splints, Curbs, and Wind Galls; also for Cuts, Broken Knees, Wrung Shoulders, Sore Backs, Chapped Heels, Sore Throats, Influenza, Rheumatics, &c.

This Embrocation is considered by the Public to be the best out for the cure of the above-mentioned cases, and no owner of Horses, Cattle, or Dogs should be without it.

This invaluable Preparation can be obtained of all Saddlers' Ironmongers, Saddlers, Chemists, &c., and from the Manufacturer,

W. CLARK, 528 Oxford Street, LONDON.

HANDSOME SHOW CARDS, from 120 x 84 to 6 x 4.

N.B.—THE TRADE SUPPLIED AT WHOLESALE PRICES.

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A CAUTION.

It is quite a mistake to suppose the public will buy Homœopathic Medicines no matter what name is on the bottle. The danger of unreliable preparations being placed upon the market is great, and we would point out to Chemists and wholesale dealers that Homœopaths are quite aware of this, and will have the medicines of a reliable manufacturer. No bottle should be stocked that does not bear the name of a firm *legally qualified* and able to call themselves

HOMŒOPATHIC CHEMISTS.

For years we have been supplying our agents with genuine Homœopathic remedies at moderate prices, leaving the retailer a handsome profit. We are successors to HEADLAND & Co.,

THE FIRST ESTABLISHED HOMŒOPATHIC CHEMISTS

in Great Britain. The late Dr. Quin was the first Physician who practised Homœopathy in this country, and he obtained the services of Mr. W. HEADLAND, the chemist in Gray's Inn Road, to manufacture the remedies for him instead of importing them from the Continent. HEADLAND afterwards removed to Prince's Street, Hanover Square, and the business was some years ago purchased by KEENE & ASHWELL and transferred to their Pharmacy in New Bond Street. Their name and address, and as successors to HEADLAND & Co., will alone ensure a sale, and they ask buyers to write for a complete list of their agents' show-cases, which gives information as to the best stock to hold. The profit, as before mentioned, is good; for instance, the contents of a 50/- bent-glass show-case will realise, at retail prices, £5 5s., and the case alone is worth 25/-. Their £10 10s. colonial agents' show-case will bring £22, and a case worth £4. KEENE & ASHWELL invite Chemists at home and abroad to correspond with them, and they will give every information as to the best means of developing a profitable agency with little outlay.

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(SUCCESSORS TO HEADLAND & CO.),

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THEY DO NOT SUPPLY SECOND QUALITY. ONLY THE BEST!

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324 CHAMOIS AND FLANNEL.

	No. 1	2	3	4	5	6
Gents'	per dozen 10/6	12/6	14/6	17/	23/	—
Ladies'	7/6	9/6	11/6	14/	20/	—
Children's	"	"	6/			

325 FELT, SCARLET, OR WHITE.

	No. 1	2	3	4	5	6
Gents'	10/	11/6	13/6	16/	21/	27/
Ladies'	7/	9/	11/	13/6	19/	22/
Children's	"	"	5/			

Sizes of above—No. 1, 9 × 10 in.; No. 2, 9½ × 11 in.; No. 3, 10½ × 12 in.; No. 4, 12 × 14 in.; No. 5, 13 × 15 in.
No. 6, 14 × 16 in.

	No. 1	2	3	4	5	6
326 "DREADNOUGHT," felt, covering chest and back	16/6	22/	27/	33/	44/	50/
Children's			12/6			

326A "DREADNOUGHT," chamois and flannel, per doz., No. 1, 18/; No. 2, 24/; No. 3, 30/; No. 4, 36/; No. 5, 48/6; No. 6, 55/.

326B "WAISTCOAT PATTERN," chamois and flannel, per doz., No. 1, 23/; No. 2, 31/6; No. 3, 40/; No. 4, 49/6; No. 5, 61/; No. 6, 71/.

326C "WAISTCOAT PATTERN," felt, scarlet and white, per doz., No. 1, 20/; No. 2, 28/6; No. 3, 36/; No. 4, 44/; No. 5, 54/6; No. 6, 67/.

326D "CUIRASS," chamois and flannel, per doz., No. 1, 26/6; No. 2, 33/; No. 3, 39/6; No. 4, 47/6; No. 5, 59/6; No. 6, 72/.

327 "CUIRASS," felt, reaching from neck to hips, front and back, and fastening with laces and eyelets, five sizes, per doz., No. 1, 24/; No. 2, 30/; No. 3, 36/; No. 4, 43/; No. 5, 54/; No. 6, 66/.

(Sizes of "Cuirass"—No. 1, 11½ × 9½ in.; No. 2, 13 × 11 in.; No. 3, 16 × 11½ in.; No. 4, 17 × 13 in.; No. 5, 18 × 14 in.; No. 6, 18 × 17½ in.)

327A CUIRASS JACKETS, with half sleeves, buttoning down front, made of perforated chamois leather and porous scarlet flannel, in four sizes, each, 32 × 18 in., 6/6; 34 × 18½ in., 7/6; 37 × 20½ in., 8/6; 39 × 21 in., 9/6.

(Larger or smaller sizes made to order.)

CHEST PROTECTORS MADE OF PINE FELT.

Specially Recommended for Rheumatism.

SINGLE—	No. 1	2	3	4	5
Ladies'	per dozen 7/6	9/6	11/6	14/	20/
DOUBLE, Covering—					
Chest and back	16/6	22/	27/	33/	44/

Ordinary Quantity	...	...	...	10%	Monthly Account.
By £2 Worth	...	...	...	15%	" "
By £10 Worth	...	...	...	20%	" "
By £50 Worth	...	...	...	25%	" "

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Waters are offered to the public with very similar to those which are Water so long imported by additional Label of their own, Trade Mark of selection, consists of

A RED

DIAMOND.

This Label will henceforth also serve APERIENT WATER SOLD BY THE COM-

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Cadbury's Cocoa IS SOLUBLE
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